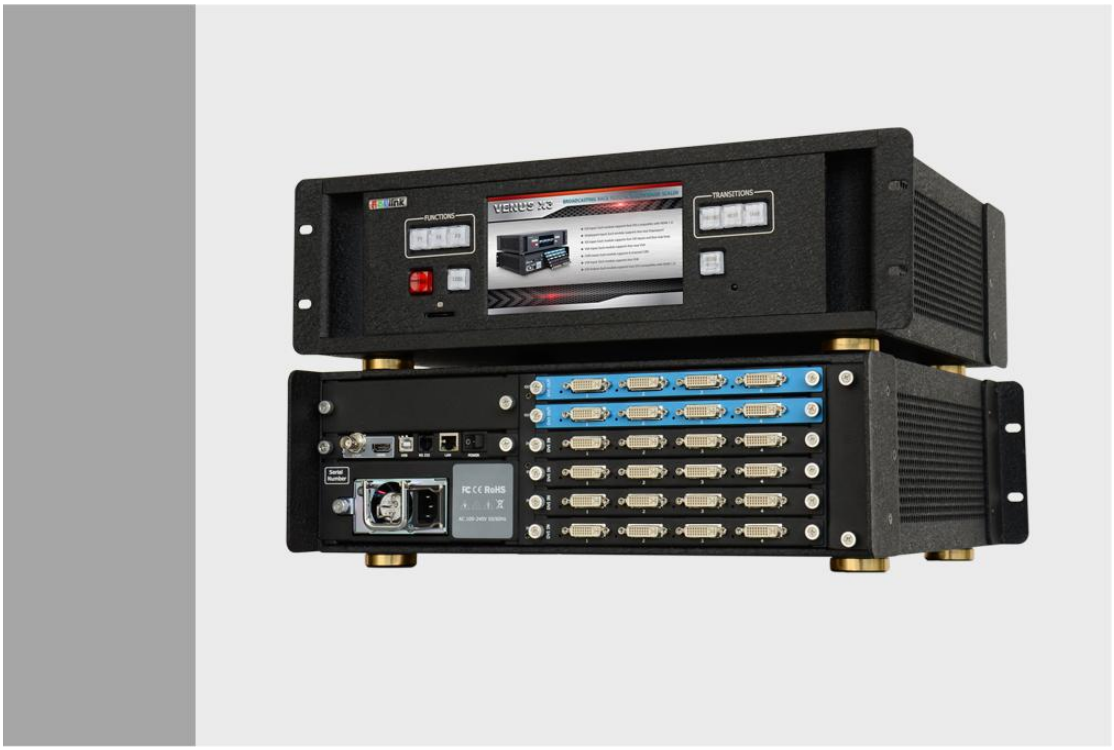
# VENUS X3



# User Manual

- Manual #: RGB-RD-UM-VENUS X3 E001
- Revision: V1.4

RGBlink

# VENUS X3·User Manual

Thank you for choosing our products!
In order to allow you to learn how to use the video processor quickly, we bring you the detailed user Manual. You can read the introduction and directions before using the video processor, please read all the information we provide carefully to use our products correctly.

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# Operators Safety Summary

The general safety information in this summary is for operating personnel.

## Do Not Remove Covers or Panels

There are no user-serviceable parts within the unit. Removal of the top cover will expose dangerous voltages. To avoid personal injury, do not remove the top cover. Do not operate the unit without the cover installed.

## Power Source

This product is intended to operate from a power source that will not apply more than 230 volts rms between the supply conductors or between both supply conductor and ground. A protective ground connection by way of grounding conductor in the power cord is essential for safe operation.

## Grounding the Product

This product is grounded through the grounding conductor of the power cord. To avoid electrical shock, plug the power cord into a properly wired receptacle before connecting to the product input or output terminals. A protective-ground connection by way of the grounding conductor in the power cord is essential for safe operation.

## Use the Proper Power Cord

Use only the power cord and connector specified for your product. Use only a power cord that is in good condition. Refer cord and connector changes to qualified service personnel.

## Use the Proper Fuse

To avoid fire hazard, use only the fuse having identical type, voltage rating, and current rating characteristics. Refer fuse replacement to qualified service personnel.

## Do Not Operate in Explosive Atmospheres

To avoid explosion, do not operate this product in an explosive atmosphere.

# Terms in This Manual and Equipment Marking

## WARNING

Highlight an operating procedure, practice, condition, statement, etc, which, if not strictly observed, could result in injury or death of personnel.

**Note**

| |
|---|
| Highlights an essential operating procedure, condition or statement. |

## CAUTION

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

# Amendment Records

The table below lists the changes to the Video Processor User Manual.

| Format | Time | ECO# | Description | Principal |
|---|---|---|---|---|
| V1.0 | 2015-01-06 | 0000# | Release. | Vira |
| V1.1 | 2015-05-07 | 0001# | 1. Add the optional module.<br>2. Update the menu tree.<br>3. Update the windows control program. | Vira |
| V1.2 | 2015-07-17 | 0002# | 1. Add the menu operation instruction.<br>2. Add “Optional Module Installation and Replacement Instruction”. | Vira |
| V1.3 | 2015-07-29 | 0003# | 1. Update the windows control program.<br>2. Update the common Questions and solutions.<br>3. Update the specification. | Vira |
| V1.4 | 2015-12-02 | 0004# | 1. Update the back panel.<br>2. Update the windows control program.<br>3. Update the software upgrade.<br>4. Update the specification. | Vira |
| | | | | |

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# 1. Brief Introduction

This chapter is designed to introduce you to the VENUS X3 User Manual. Areas to be covered are:

- Chapter Structure
- How to Use the Manual
- Terms and Definitions
- System Overview
- Application Questions

## Chapter Structure

The following chapters provide instructions for all aspects of VENUS X3 operations.

Chapter 1 Brief Introduction

Chapter 2 Hardware Orientation

Chapter 3 Hardware Installation

Chapter 4 Menu Orientation

Chapter 5 Communication Software Guideline

Chapter 6 Common Questions and Solution

Appendix A Specification

Appendix B Contact Information

Appendix C Software Upgrade

Appendix D Optional Module Installation and Replacement Instruction

## How to Use the Manual

Followings are important tips for streamlining your use of this User Manual in its electronic “PDF” form.

### Navigation

Use Acrobat Reader’s “bookmarks” to navigate to the desired location. All chapter files have the same bookmark structure for instant navigation to any section. Please note:

- Extensive hyperlinks are provided within the chapters.
- Use Acrobat’s “**Go to Previous View**” and “**Return to next View**” buttons to trace your complete navigational path.

- Use the “**Previous Page**” and “**Next Page**” buttons to go to the previous or next page within a file.
- Use Acrobat’s extensive search capabilities, such as the “**Find**” tool and “**Search Index**” tool to perform comprehensive searches as required.

### Table of Contents and Index

Use the Table of Contents bookmarks to navigate a desired topic. Click any item to instantly jump to that section of the guide. You can also use the **Index** to jump to specific topics within a chapter. Each page number in the **Index** is a hyperlink.

### General Operations

To ensure trouble-free operation, please follow all procedures as listed below:

- For detailed installation instructions, refer to chapter 3 “Hardware Installation” on page 32.
- For communication software control guide, refer to Chapter 5, “Communication Software Control Guide” on page 52.

Should you have any questions regarding the installation or operation of VENUS X3, please consult with the factory. Refer to Appendix B “Contact information” on page 91.

## Term and Definitions

The following terms and definitions are used throughout this guide.

- **“ASCII”:** American Standard for Information Interchange. The standard code consisting of 7-bit coded characters (8 bits including parity check) used to exchange information between data processing systems, data communication systems, and associated equipment. The ASCII set contains control characters and graphic characters.
- **“Aspect ratio”:** The relationship of the horizontal dimension to the vertical dimension of an image. In viewing screens, standard TV is 4:3, or 1.33:1; HDTV is 16:9, or 1.78:1. Sometimes the “:1” is implicit, making TV = 1.33 and HDTV = 1.78.
- **“AV”:** Audio visual or audio video.
- A **“Background”** is an unscaled source, typically originating from a computer. A background source appears at the system’s lowest priority — visually in back of all other sources.
- **“Baudrate”：** Named of J.M.E. Baudot, the inventor of the Baudot telegraph code. The number of the electrical oscillations per second, called baud rate. Related to, but not the same as, transfer rate in bits per second (bps).
- **“Blackburst”:** The video waveform without the video elements. It includes the vertical sync, horizontal sync, and the chroma burst information. Blackburst is used to synchronize video equipment to align the video output. One signal is normally used to set up an entire video system or facility. Sometimes it is called House sync.
- **“BNC”:** Bayonet Neill-Concelman. A cable connector used extensively in television and named for its inventors. A cylindrical bayonet connector that operates with a twist-locking motion. To make the connection, align the two curved grooves in the collar of the male connector with the two projections on the outside of the female collar, push, and twist. This allows the connector to lock into place without tools.
- **“Brightness”:** Usually refers to the amount or intensity of video light produced on a screen without regard to color. Sometimes called “black level.
- “**CAT 5**”**:** Category 5. Describes the network cabling standard that consists of four unshielded twisted pairs of copper wire terminated by RJ-45 connectors. CAT 5 cabling supports data rates up to 100 Mbps. CAT 5 is based on the EIA/TIA 568 Commercial Building Telecommunications Wiring Standard.
- **“Color bars”:** A standard test pattern of several basic colors (white, yellow, cyan, green, magenta, red, blue, and black) as a reference for system alignment and testing. In NTSC video, the most commonly

# 1. Brief Introduction

Terms and Definitions

- Used color bars are the SMPTE standard color bars. In PAL video, the most commonly used color bars are eight full field bars. In the computer, the most commonly used color bars are two rows of reversed color bars.
- **“Color burst”:** In color TV systems, a burst of sub carrier frequency located on the back porch of the composite video signal. This serves as a color synchronizing signal to establish a frequency and phase reference for the chroma signal. Color burst is 3.58 MHz for NTSC and 4.43 MHz for PAL.
- **“Color temperature”:** The color quality, expressed in degrees Kelvin (K), of a light source. The higher the color temperature, the bluer the light. The lower the temperature, the redder the light. Benchmark color temperature for the A/V industry includes 5000°K, 6500°K, and 9000°K.
- **“Contrast ratio”:** The radio of the high light output level divided by the low light output level. In theory, the contrast radio of the television system should be at least 100:1, if not 300:1. In reality, there are several limitations. In the CRT, light from adjacent elements contaminate the area of each element. Room ambient light will contaminate the light emitted from the CRT. Well-controlled viewing conditions should yield a practical contrast ratio of 30:1 to 50:1.
- **“DVI”:** Digital Visual Interface. The digital video connectivity standard that was developed by DDWG (Digital Display Work Group). This connection standard offers two different connectors: one with 24 pins that handles digital video signals only, and one with 29 pins that handles both digital and analog video.
- **“EDID”:** Extended Display Identification Data – EDID is a data structure used to communicate video display information, including native resolution and vertical interval refresh rate requirements, to a source device. The source device will then output the optimal video format for the display based on the provided EDID data, ensuring proper video image quality. This communication takes place over the DDC – Display Data Channel.
- **“Ethernet”:** A Local Area Network (LAN) standard officially known as IEEE 802.3. Ethernet and other LAN technologies are used for interconnecting computers, printers, workstations, terminals, servers, etc. within the same building or campus. Ethernet operates over twisted pair and over coaxial cable at speeds starting at 10Mbps. For LAN interconnectivity, Ethernet is physical link and data link protocol reflecting the two lowest layers of the OSI Reference Model.
- **“Frame”:** In interlaced video, a frame is one complete picture. A video frame is made up of two fields, or two sets of interlaced lines. In a film, a frame is one still picture of a series that makes up a motion picture.

# 1. Brief Introduction

Terms and Definitions

- **“Gamma”:** The light output of a CRT is not linear with respect to the voltage input. The difference between what you should have and what is actually output is known as gamma.
- **“HDMI” - High – Definition Multimedia Interface:** An interface used primarily in consumer electronics for the transmission of uncompressed high definition video, up to 8 channels of audio, and control signals, over a single cable. HDMI is the de facto standard for HDTV displays, Blu-ray Disc players, and other HDTV electronics. Introduced in 2003, the HDMI specification has gone through several revisions.
- **“HDSDI”:** The high-definition version of SDI specified in SMPTE-292M. This signal standard transmits audio and video with 10 bit depth and 4:2:2 color quantization over a single coaxial cable with a data rate of 1.485 Gbit/second. Multiple video resolutions exist including progressive 1280x720 and interlaced 1920x1080 resolutions. Up to 32 audio signals are carried in the ancillary data.
- **“JPEG” (Joint photographic Expects Group):** Commonly used method of loss compression for photographic images using a discreet cosine transfer function. The degree of compression can be adjusted, allowing a selectable tradeoff between storage size and image quality. JPEG typically achieves 10:1 compression with little perceptible loss in image quality. Produces blocking artifacts.
- **“MPEG”:** Motion Picture Expect Group. A standard committee under the auspices of the International Standards Organization working on algorithm standards that allows digital compression, storage and transmission of moving image information such as motion video, CD-quality audio, and control data at CD-ROM bandwidth. The MPEG algorithm provides inter-frame compression of video images and can have an effective compression rate of 100:1 to 200:1.
- **“NTSC”:** The color video standard used in North America and some other parts of the world created by the National Television Standards Committee in the 1950s. A color signal must be compatible with black-and-white TV sets. NTSC utilizes an interlaced video signals, 525 lines of resolution with a refresh rate of 60 fields per second (60 Hz). Each frame is comprised of two fields of 262.5 lines each, running at an effective rate of 30 frames per second.
- **“PAL”:** Phase Alternate Line. A television standard in which the phase of the color carrier is alternated from line to line. It takes four full pictures (8 fields) for the color-to-horizontal phase relationship to return to the reference point. This alternation helps cancel out phase errors. For this reason, the hue control is not needed on a PAL TV set. PAL, in many transmission forms, is widely used in Western Europe, Australia, Africa, the Middle East, and Micronesia. PAL uses 625-line,

50-filed (25 fps) composite color transmission system.

- **“Operator”:** Refers to the person who uses the system.
- **“PIP”:** Picture-in-Picture. A small picture within a larger picture created by scaling down one of the images to make it smaller. Each picture requires a separate video source such as a camera, VCR, or computer. Other forms of PIP displays include Picture-by-Picture (PBP) and Picture-with-Picture (PWP), which are commonly used with 16:9 aspect display devices. PBP and PWP image formats require a separate scaler for each video window.
- **“Polarity”:** The positive and negative orientation of a signal. Polarity usually refers to the direction or a level with respect to a reference (e.g. positive sync polarity means that sync occurs when the signal is going in the positive direction).
- **“RJ-45”:** Registered Jack-45. A connector similar to a telephone connector that holds up to eight wires used for connecting Ethernet devices.
- “**RS-232”:** An Electronic Industries Association (EIA) serial digital interface standard specifying the characteristics of the communication path between two devices using either DB-9 or DB-25 connectors. This standard is used for relatively short-range communication and does not specify balanced control lines. RS-232 is a serial control standard with a set number of conductors, data rate, word length, and type of connector to be used. The standard specifies component connection standards with regard to the computer interface. It is also called RS-232-C, which is the third version of the RS-232 standard, and is functionally identical to the CCITT V.24 standard.
- **“Saturation”:** Chroma, chroma gain. The intensity of the color, or the extent to which a given color in any image is free from white. The less white in a color, the truer the color or the greater its saturation. On a display device, the color control adjusts the saturation. Not to be confused with the brightness, saturation is the amount of pigment in a color, and not the intensity. Low saturation is like adding white to the color. For example, a low-saturated red looks pink.
- **“Scaling”:** A conversion of a video or computer graphic signal from a starting resolution to a new resolution. Scaling from one resolution to another is typically done to optimize the signal for input to an image processor, transmission path or to improve its quality when presented on a particular display.
- **“SDI”:** Serial Digital Interface. The standard based on a 270 Mbps transfer rate. This is a 10-bit, scrambled, polarity independent interface with common scrambling for both component ITU-R 601 and composite digital video and four channels of (embedded) digital audio.
- **“Seamless Switching”:** A feature found on many video switchers. This

feature causes the switcher to wait until the vertical interval to switch. This avoids a glitch (temporary scrambling) which normally is seen when switching between sources.

- **“SMPTE”:** Society of Motion Picture and Television Engineers. A global organization, based in the United States that sets standards for base band visual communications. This includes film as well as video and television standards.
- **“S-Video”:** A composite video signal separated into the luma (“Y” is for luma, or black and white information; brightness) and the chroma (“C” is an abbreviation for chroma, or color information).
- **“Sync”:** Synchronization. In video, sync is a means of controlling the timing of an event with respect to other events. This is accomplished with timing pulses to insure that each step in a process occurs at the correct time. For example, horizontal sync determines exactly when to begin each horizontal scan line. Vertical sync determines when the image is to be refreshed to start a new field or frame. There are many other types of sync in video system. (Also known as “sync signal” or “sync pulse.”)
- **“TCP/IP”:** Transmission Control Protocol/Internet Protocol. The communication protocol of the Internet. Computers and devices with direct access to the Internet are provided with a copy of the TCP/IP program to allow them to send and receive information in an understandable form.
- **“USB”:** Universal Serial Bus. USB was developed by seven PC and telecom industry leaders (Compaq, DEC, IBM, Intel, Microsoft, NEC, and Northern Telecom). The goal was easy plug-and-play expansion outside the box, requiring no additional circuit cards. Up to 127 external computer devices may be added through a USB hub, which may be conveniently located in a keyboard or monitor. USB devices can be attached or detached without removing computer power. The number of devices being designed for USB continues to grow, from keyboards, mice, and printers to scanners, digital cameras, and ZIP drives.
- **“VESA”:** Video Electronics Standards Association. A nonprofit number organization dedicated to facilitating and promoting personal computer graphics through improved standards for the benefit of the end-user. www.vesa.org
- **“VGA”:** Video Graphics Array. Introduced by IBM in 1987, VGA is an analog signal with TTL level separate horizontal and vertical sync. The video outputs to a 15-pin HD connector and has a horizontal scan frequency of 31.5 kHz and vertical frequency of 70 Hz (Mode 1, 2) and 60 Hz (Mode 3). The signal is non-interlaced in modes 1, 2, and 3 and interlaced when using the 8514/A card (35.5 kHz, 86 Hz) in mode 4. It

has a pixel by line resolution of 640×480 with a color palette of 16 bits and 256,000 colors.

- **“YCrCb”:** Used to describe the color space for interlaced component video.
- **“YPbPr”:** Used to describe the color space for progressive-scan (non-interlaced) component video.

## System Overview

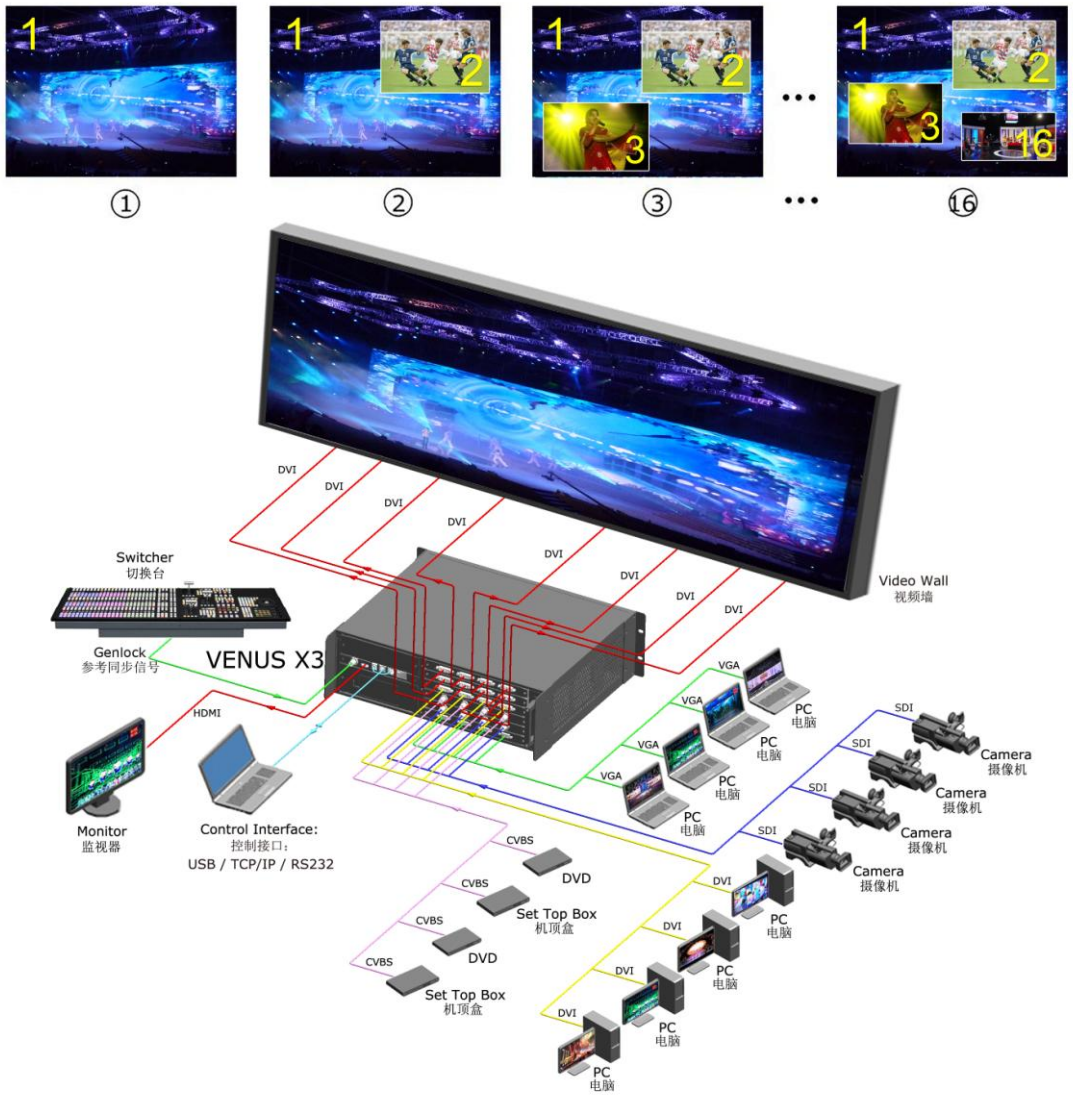
VENUS X3 is an HDCP-compliant, scalable, expandable videowall processor configurable to support a variety of input, output and windowing capabilities. It features high performance video scaling capable of producing very high quality images.

VENUS X3 offers six card cages that support various combinations of input and output cards for DVI, VGA, HDMI, CVBS, SDI and USB (for media files play) or video sources. Hundreds of additional video or graphic sources can be input to the VENUS X3 using the RGBlink AVDXP Matrix and Router. Multiple VENUS X3 can be cascaded to create very large display arrays.

A dedicated, high-speed video/graphic bus maintains real-time performance even under heavy loading of inputs. Compared with other videowall processors, VENUS X3 extends two main important performance for presentation application. One is seamless switching between the inputs, the other comes with local control panel option. These advantages make the VENUS X3 ideal for all types for all types of surveillance, presentation, and visualization applications, whether traffic, security, military, or process control.

# Application Questions

RGBlink offers solutions to demand technical problems. Any application questions, or required further information, please contact with our Customer Support Engineers. Refer to Appendix B for contact details.



# 2. Hardware Orientation

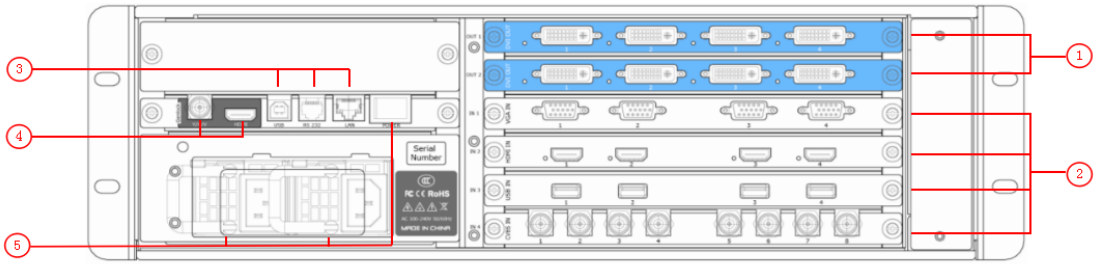
## In This Chapter

This chapter provides detailed information about the VENUS X3 hardware. The following topics are discussed:


- VENUS X3 Back Panel
- VENUS X3 Front Panel

# VENUS X3 Back Panel

The figure below illustrates the professional interface and control signals of VENUS X3 back panel.




| Chassis Module Structure | | | |
|---|---|---|---|
| 1 | 2 output card slots | 4 | Genlock interface |
| 2 | 4 input card slots | 5 | Power module and switch |
| 3 | Control interface | | |

## Input Card Slots

VENUS X3 offers 4 input card slots, supports input signals including DVI, VGA, HDMI, USB, CVBS, S-HDMI, S-SDI, Dual Link DVI and SDI. Each DVI optional module includes 4 DVI-I (compatible with HDMI) inputs, each VGA optional module includes 4 VGA inputs (DB15port), each HDMI optional module includes 4 HDMI inputs, each USB optional includes 4 USB inputs, each CVBS optional includes 8 CVBS inputs, each S-HDMI optional module includes 4 HDMI inputs, each S-SDI optional module includes 4 3G-SDI inputs and 4 SDI loop out, each Dual Link DVI optional module includes 2 DVI-I inputs, each SDI optional module includes 4 3G-SDI inputs and 4 SDI loop out.

## DVI Input

DVI input, input the video signal from computer, DVI signal generator. If the EDID is HDMI, the DVI can be compatible with HDMI 1.3.

(This connector does not support hot-plugging ).

# 2. Hardware Orientation

VENUS X3 Back Panel

## VGA Input

VGA input, input the video signal from HD player and Computer, etc. compatible with YPbPr signal, input signal via the DB15 interface.

## HDMI Input

HDMI input, input the image signal from computer.

## USB Input

USB input, can access the USB device or mobile hard disk with USB storage function. Support general image and video formats.

## CVBS Input

CVBS input, input standard video signal from players, cameras etc., supported resolution 480i and 576i via BNC. Supported standards include: PAL, NTSC and SECAM.

## S-HDMI Input

S-HDMI input, input the image signal from computer. It supports signals merger and effects processing.

## S-SDI Input

S-SDI input, input video signal from HD camera and radio processing equipment, connect SDI interface via 75 ohms impedance BNC port. It supports synchronization and effects processing.

## S-SDI Loop Out

SDI loop out, connect to the SDI input of the next VENUS X3 or the device with DVI input.

## Dual Link DVI Input

DVI input, input the video signal from computer, DVI signal generator. The DVI can be compatible with HDMI 1.3 if the EDID is HDMI.

# 2. Hardware Orientation

VENUS X3 Back Panel

## 3G-SDI Input

3G-SDI input, input video signal from HD camera and radio processing equipment, connect SDI interface via 75 ohms impedance BNC port.

## SDI Loop Out

SDI loop out, connect to the SDI input of the next VENUS X3 or the device with DVI input.

## Output Card Slots

VENUS X3 offers 2 offers 2 output module slots, supports DVI, VGA, SDI and HDMI signal. Each DVI optional module includes 4 DVI-I outputs, each DVI+VGA optional module includes 4 DVI-I outputs, each SDI optional module includes 4 SDI outputs, each HDMI optional module includes 4 HDMI outputs.

## DVI Output

Connect to the monitor or LED display which has DVI interface.

(This connector does not support hot-plugging).

## DVI +VGA DVI Output

DVI +VGA output, connect to the monitor or LED display which has DVI interface via DVI connector.

(This connector can not support hot-plugging)

The VGA output signal can be connected to monitor or projector.

Via adapter, can connect with DVI-based or VGA-based equipment, and via

DVI to VGA adapter, can output VGA only.

# 2. Hardware Orientation

VENUS X3 Back Panel

## SDI Output

SDI output, can connect the next level device with SDI interface.

## HDMI Output

HDMI output interface, used to connect to the display device, video processor or matrix.

## Control Interface

Includes 1 USB, 1 RS-232 and 1 10/100M UDP interface.

## USB Interface

Used to connect the windows control program or device upgrade.

## RS-232 Interface

Used to connect the windows control program or device upgrade.

## 10/100M UDP Interface

Used to connect the windows control program or device upgrade.

## Genlock Interface

Includes 1 genlock input and 1 HDMI output.

## Genlock Input

Input signal from the controller or signal generator and other devices.

## HDMI Input

HDMI input, input the image signal from computer.

## Switch and Power

## Power Module and Switch

AC 100-240V 50/60Hz IEC-3 Power Interface.

## VENUS X3 Front Panel

Insert power cord and push the switch to the ON position. The touch screen operation panel on the front panel will show as follows and go into circulation statement. User can operate VENUS X3 through the menus on front panel.

The VENUS X3 touch screen operation panel show as follows after boot:

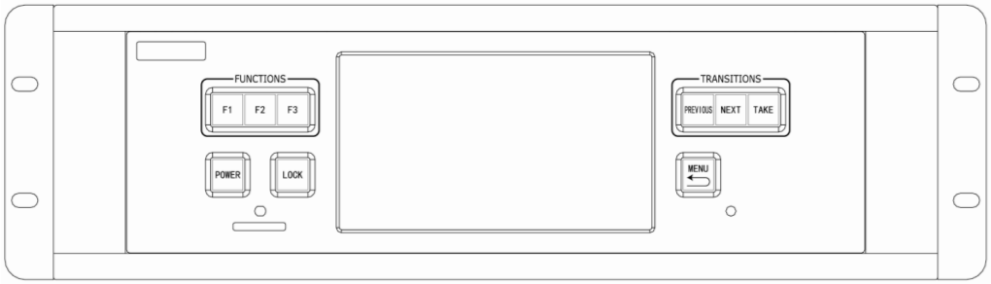
VENUS X3
BROADCASTING RACK PLUG-IN MULTIVIEWER SCALER
DVI Input: Each module supports four DVI (compatible with HDMI 1.3)
Displayport input: Each module supports two-way Displayport
SDI Input: Each module supports four SDI inputs and four-way loop
VGA input: Each module supports four-way VGA
CVBS input: Each module supports 8-channel CVBS
USB Input: Each module supports four USB
DVI Output: Each module supports four DVI (compatible with HDMI 1.3)

The system go into circulation statement, about 1 minute later, it switches to the menu interface, and the device is in normal operation.

# 2. Hardware Orientation

VENUS X3 Front Panel

VENUS X3 front panel is as following:



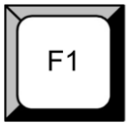

### Touch Screen Operation Panel

Support the function menu displaying and the touch operating, except the preview outputs.

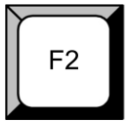
### SD Card Insert Port

Used to device upgrade.

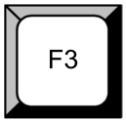
### User Defined Function Button




User defined function button 1.




User defined function button 2.




User defined function button 3.

### Function Button

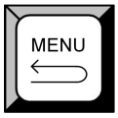
Move previous scene button, push the button, the output will move to the previous scene.

Move next scene button, push the button, the output will move to the next Scene.

# 2. Hardware Orientation

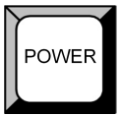
VENUS X3 Front Panel

Seamless fade in fade out switching button. Push the button, the preview will be switched to the program with fade in fade out effect.




Menu and exit function reuse key. Push the button to enter to the menu items. Choose the menu for setting by touch screen operation panel. Push the button again to return to the last level menu or exit the menu.

For more details, please refer to MENU part.




Power button, push the button, the touch screen will pop up the confirm box, choose “OK”, and turn the device off.

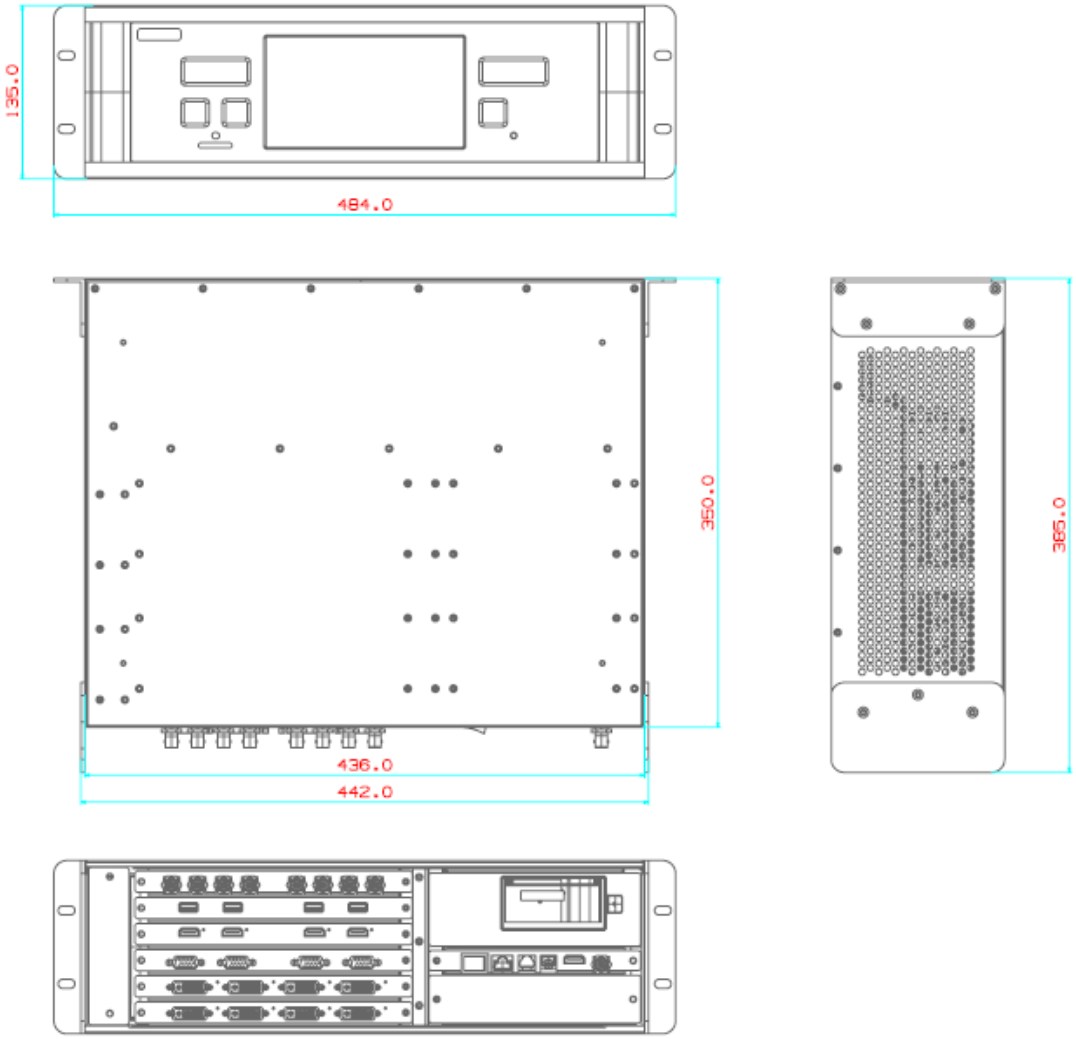
Lock front panel button, push the button, its LED light is on, all buttons are locked, and any operations are unavailable. Push it again to cancel this function.

# 3. Hardware Installation

## In This Chapter

This chapter provides comprehensive installation instruction for VENUS X3 hardware.

Following is the size of VENUS X3 for your reference.



## Safety Precautions

For all VENUS X3 processor installation procedures, please observe the following important safety and handling rules to avoid damage to yourself and the equipment.

- To protect users from electric shock, ensure that the chassis connects to earth via the ground wire provided in the AC power Cord.
- The AC Socket-outlet should be installed near the equipment and be easily accessible.

## Unpacking and Inspection

Before opening VENUS X3 process shipping box, inspect it for damage. If you find any damage, notify the shipping carrier immediately for all claims adjustments. As you open the box, compare its contents against the packing slip. If you find any shortages, contact your sales representative.

Once you have removed all the components from their packaging and checked that all the listed components are present, visually inspect the system to ensure there was no damage during shipping. If there is damage, notify the shipping carrier immediately for all claims adjustments.

## Site Preparation

The environment in which you install your VENUS X3 should be clean, properly lit, free from static, and have adequate power, ventilation, and space for all components.

# 4. Menu Orientation

## In This Chapter

This chapter describes all VENUS X3 processor menus, including how they are accessed, the functions that are available, and descriptions of each menu tree (in block diagram format).

The following topics are discussed:

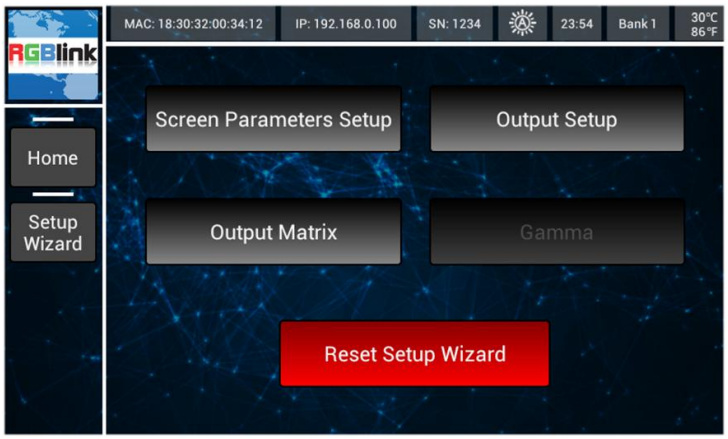
- **MENU**
  - Setup Wizard
  - Input Wizard
  - Display Setup
  - System Setup

# MENU

Plug into the power cord and enter to the menu interface as follows. Choose the menu items by touch the screen.

## Setup Wizard

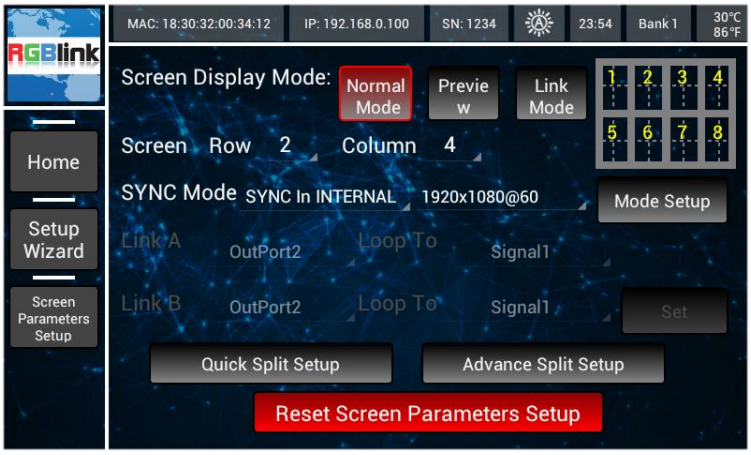
Touch the <Setup Wizard> option in the main menu to go to the next menu. User can set up the screen parameters, output and output matrix. If image quality distorts by improper operation, it can be recover by reset setup wizard.




**Screen Parameters Setup:** Touch the <Screen Parameters Setup> option, and go to the operation interface as follows:

# 4. Menu Orientation

MENU




Screen Display Mode: User can touch <Normal Mode>, <Preview Mode> or <Link Mode> to choose the screen display mode.

Screen: Touch the number beside row or column, for example: 2, it pops up the pull-down menus, user can set the row and column by touching the number in pull-down menus.

SYNC Mode: Touch the sync mode, for example: SYNC In INTERNAL, it will pop up the pull-down menus, user can choose the sync mode by touching <SYNC In INTERNAL>, <SYNC In HDMI> and <SYNC In BNC> in pull-down menus.

Output Resolution: Touch the output resolution, for example:

1920x1080@60, it pops up the pull-down menus, user can choose or custom the output resolution in pull-down menus.

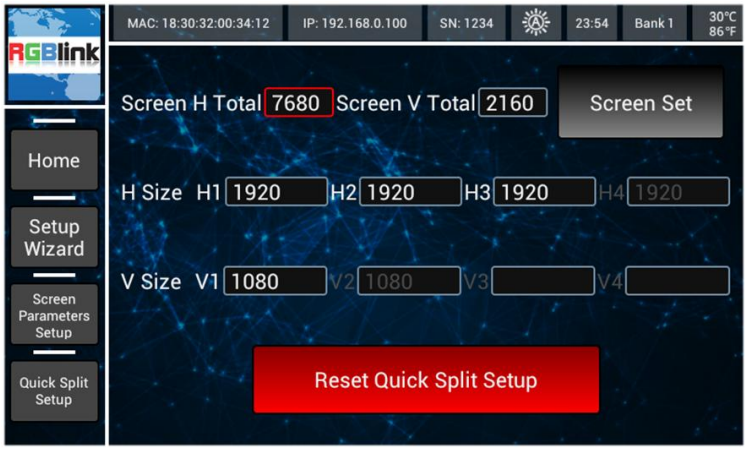
Mode Setup: Choose custom, and touch the <Mode Setup>, it will pop up the customized output resolution format window, user can set the width, height and freq.

Split Setup: User can choose Quick Split Setup or Advanced Split Setup.

Touch the <Quick Split Setup> option, and go the operation interface as follows:

# 4. Menu Orientation

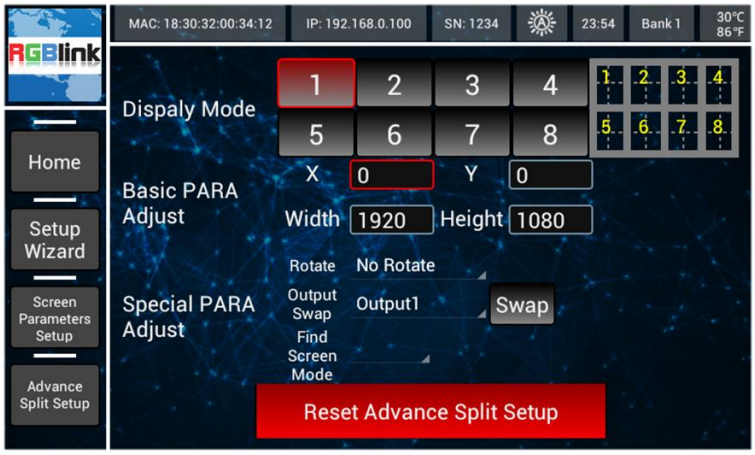
MENU




Touch the parameters of Screen H Total, Screen V Total, H Size or V Size, for example: 7680, it will pop up the numeric keypad, user can set the parameters by the numeric keypad according to actual need, touch <Screen Set> or "√" on the numeric keypad after setting.

If image quality distorts by improper operation, it can be recover by Reset Quick Split Setup.

Touch the <Advanced Split Setup> option, and go the operation interface as follows:




Display Mode: User can choose the display mode by touching the number beside it.

Basic PARA Adjust: Touch the parameters of X, Y, Width or Height, for example: 0, it will pop up the numeric keypad, user can set the parameters by the numeric keypad according to actual need, touch "√" on the numeric keypad after setting.

# 4. Menu Orientation

MENU

Touch the rotation angle, for example:

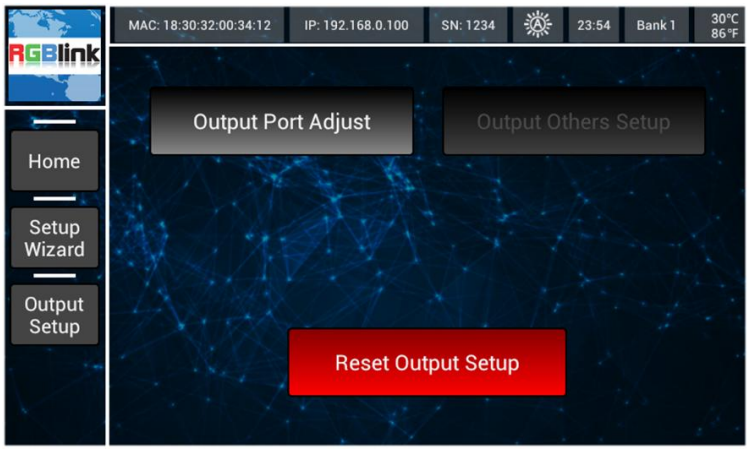
, it will pop up the pull-down menus, user can choose the rotation angle in the pull-down menus.

Special PARA Adjust: Touch the output of output swap, for example:

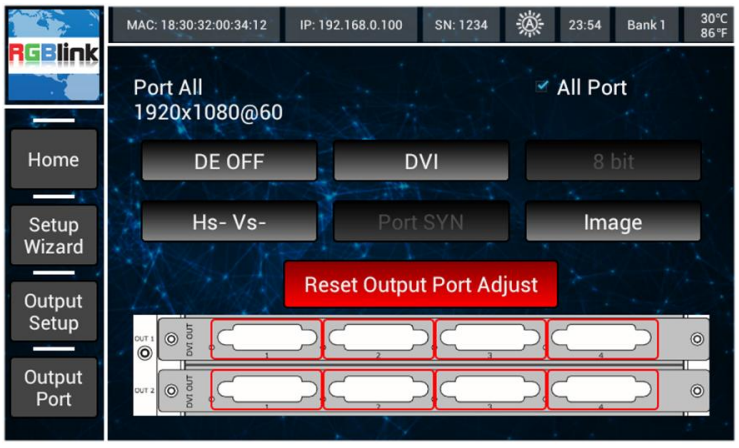
, it will pop up the pull-down menu, user can choose the output in the pull-down menus, touch <Swap> after setting.

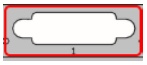
If image quality distorts by improper operation, it can be recover by Reset Advance Split Setup.

**Output Setup:** Touch the <Output Setup> option, and go to the operation interface as follows:




Touch the <Output Port Adjust> option, and go to the menu items, the operation interface is as follows:




Port: User can choose the port by touching any port  on OUT 1

and OUT 2. All the ports are selected if choose <All Port>.

DE: Touch DE OFF, it will pop up the DE setting interface, user can enable or disable the DE function. Touch the parameters of X, Y, Width or Height, it will pop up the numeric keypad, user can set the parameters by the numeric keypad according to actual need, touch "√" on the numeric keypad after setting.

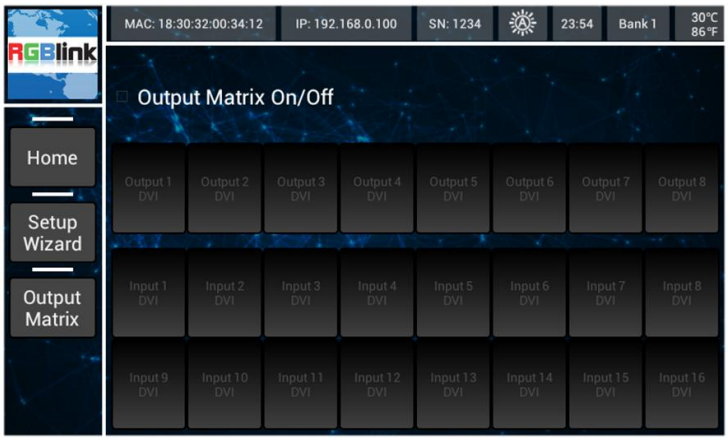
Touch DVI, user can choose DVI or HDMI.

Touch 8 bit, it will pop up the pull-down menus, user can choose 8 bit, 10 bit or 12 bit.

Touch Hs- Vs-, user can choose Hs- Vs-, Hs+ Vs-, Hs- Vs+ or Hs+ Vs+.

Touch Image, user can choose image or video.

**Output Matrix:** Enable the output matrix function, choose the output port, then choose the input port to set the output matrix.

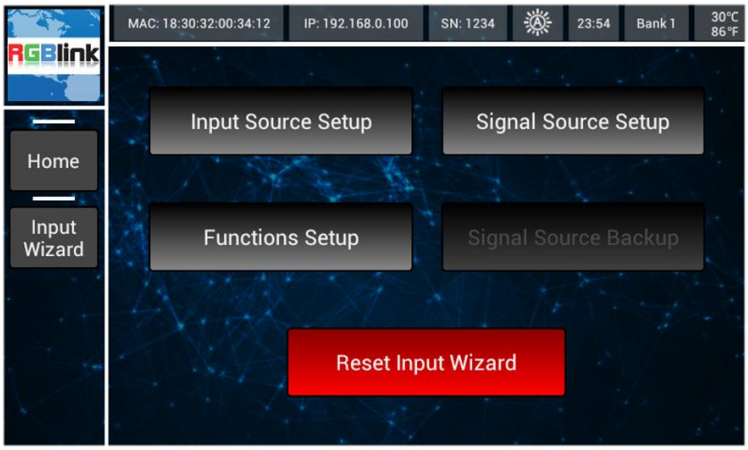



**Reset Setup Wizard:** If image quality distorts by improper operation, it can be recover by Reset Setup Wizard.

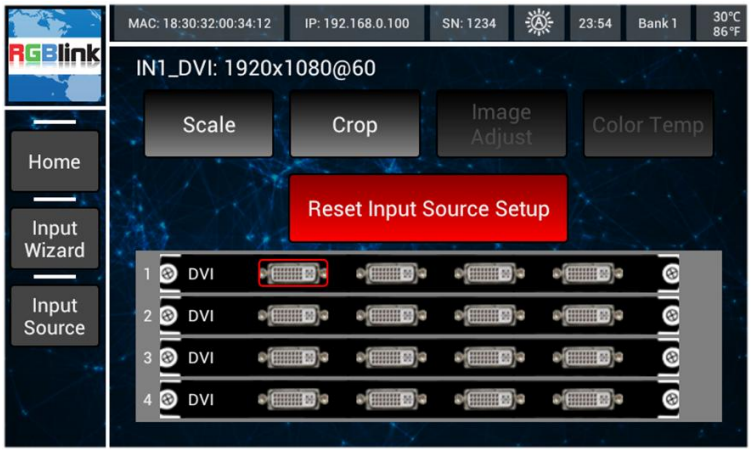
## Input Wizard

Touch the <Input Wizard> option in the main menu to go to the next menu. User can set up the input source, signal source and functions. If image

quality distorts by improper operation, it can be recover by reset Input wizard.




**Input Source Setup:** Touch the <Input Source Setup> option, and go to the operation interface as follows. Choose the input signal, user can scale or crop the image.




Signal select: Touch any input port, for example, .

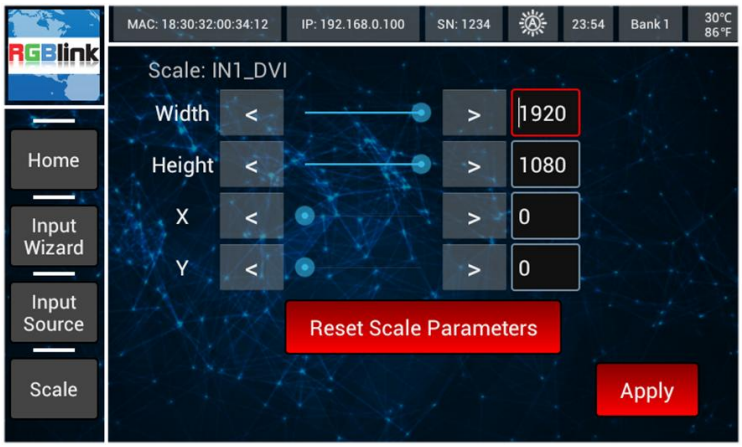
Scale: Touch <Scale>, and go to the operation interface as follows. Touch the parameters of Width, Height X or Y, it will pop up the numeric keypad, user can set the parameters by the numeric keypad according to actual need, touch "√" on the numeric keypad after setting

Touch <Apply> after setting.

If image quality distorts by improper operation, it can be recover by Reset Scale Parameters.

# 4. Menu Orientation

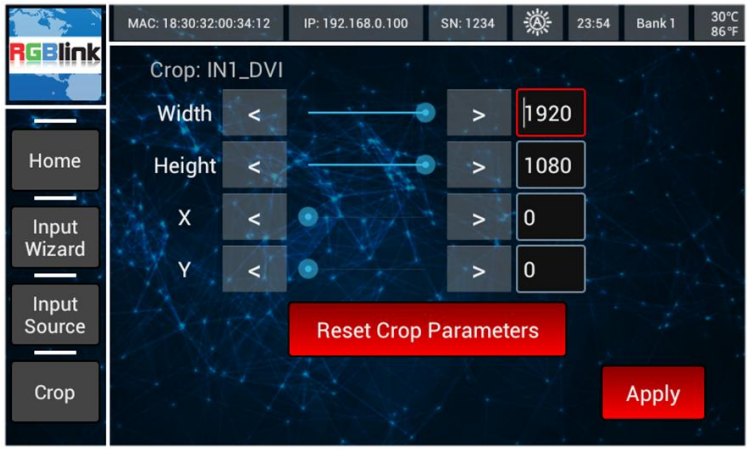
MENU




Crop: Touch <Crop>, and go to the operation interface as follows. Touch the parameters of Width, Height X or Y, it will pop up the numeric keypad, user can set the parameters by the numeric keypad according to actual need, touch "√" on the numeric keypad after setting.

Touch <Apply> after setting.

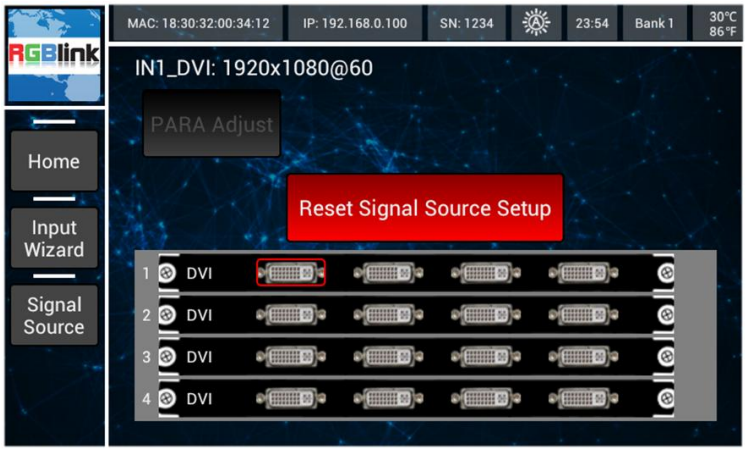
If image quality distorts by improper operation, it can be recover by Reset Crop Parameters.



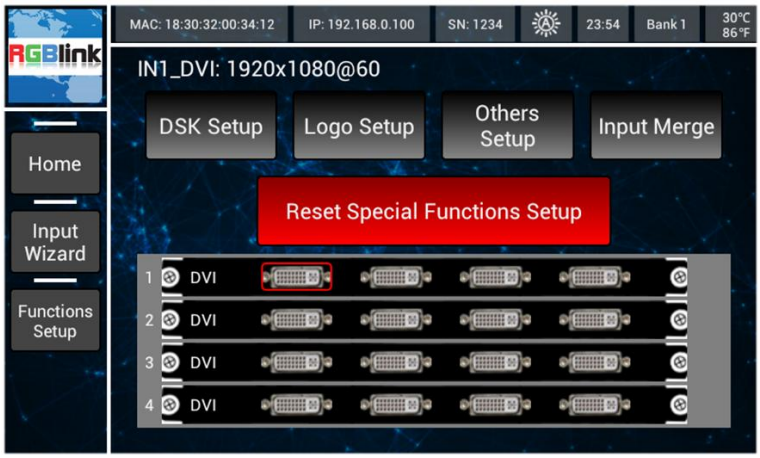

**Signal Source Setup:** Touch <Signal Source Setup>, and go to the operation interface as follows. Choose the input signal by touching any input and adjust the parameters. If image quality distorts by improper operation, it can be recover by Reset Signal Source Setup.

# 4. Menu Orientation

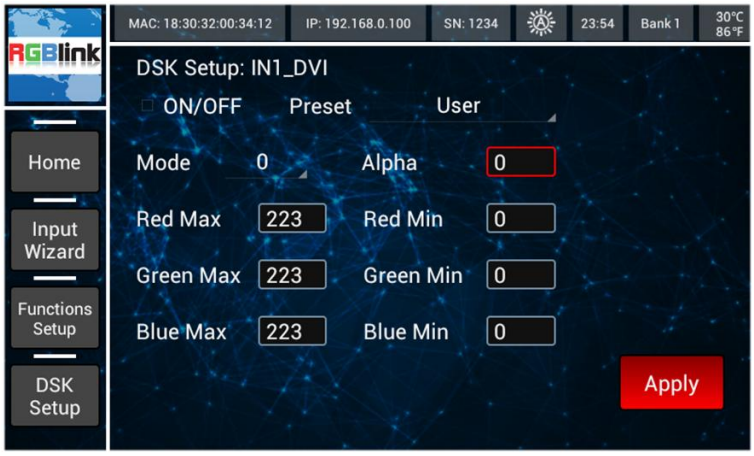
MENU




**Functions Setup:** Touch <Function Setup>, and go to the operation interface as follows. User can setup DSK, Logo, others and input merge. If image quality distorts by improper operation, it can be recover by Reset Special Functions Setup.




DSK Setup: Touch <DSK Setup>, and go to the operation interface as follows:




DSK: Tick the little box in front of

, user can enable the DSK

function.

Preset: Touch the preset mode, for example:

, it will pop up the pull-down menus, user can choose the preset mode in the pull-down menus.

Mode: Touch the mode, for example:

, it will pop up the pull-down menus, user can choose 0 or 1 in the pull-down menus.

Alpha: Touch the parameters of alpha, for example:

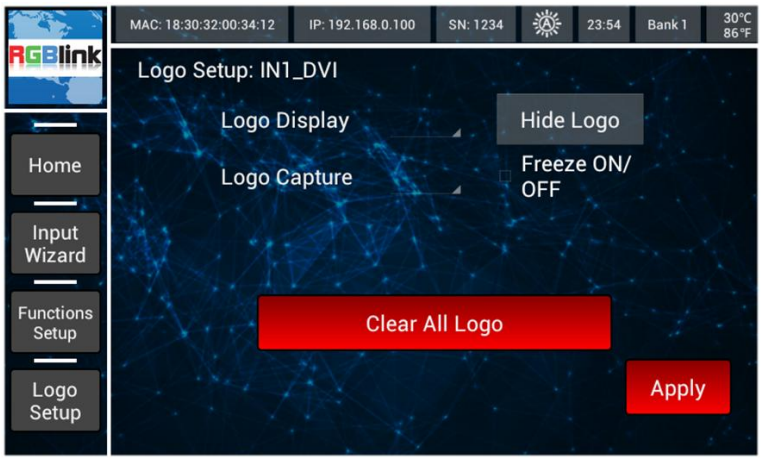
, it will pop up the numeric keypad, user can set the parameters by the numeric keypad according to actual need, touch "√" on the numeric keypad after setting.

Color: Touch the parameters of color, for example:

, it will pop up the numeric keypad, user can set the parameters by the numeric keypad according to actual need, touch "√" on the numeric keypad after setting.

Touch <Apply> after setting.

Logo Setup: Touch <Logo Setup>, and go to the operation interface as follows.



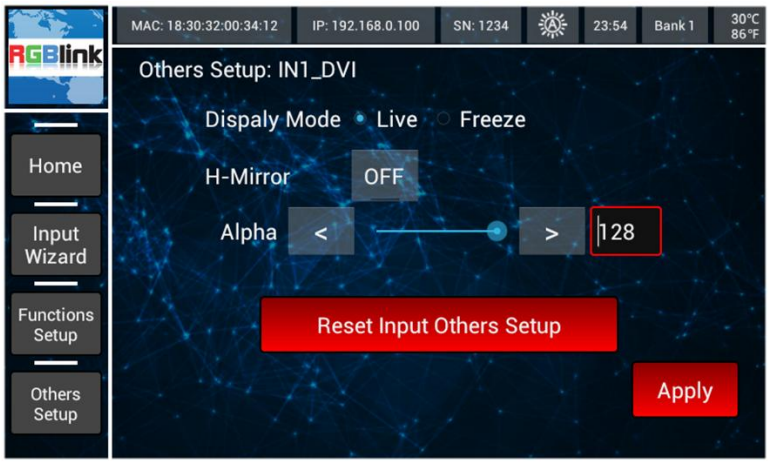

In Logo Display, touch
, it will pop up the pull-down menus, user can choose Logo 1~7 in the pull-down menus. Touch <Hide Loop> to cancel the logo display.

In Logo Capture, touch
, it will pop up the pull-down menus, user can choose Logo 1~5 in the pull-down menus. User should freeze the

image when capture logo. Tick the little box in front of <Freeze ON/OFF> to freeze the image.

User can also clear all logo. Touch <Apply> after setting.

Others Setup: Touch <Other Setup>, and go to the operation interface as follows.




Display Mode: Tick the little box in front of <Live> or <Freeze>, user can live or freeze the image.

H-Mirror: Touch the state the H-Mirror, for example:

, user can enable or disable the H-Mirror function.

Alpha: Drag the scroll bar to set the alpha of the image.

Touch <Apply> after setting.

If image quality distorts by improper operation, it can be recover by Reset Input Others Setup.

Input Merge: Touch <Input Merge>, and go to the operation interface as follows.

# 4. Menu Orientation

MENU

Input Merge: Touch any mode to choose the input merge mode, then touch the parameters of X, Y, Width or Height, it will pop up the numeric keypad, user can set the parameters by the numeric keypad according to actual need, touch "√" on the numeric keypad after setting. In single image mode, user can not adjust the parameters.

Touch <Apply> after setting.

If image quality distorts by improper operation, it can be recover by Reset Input Merge.

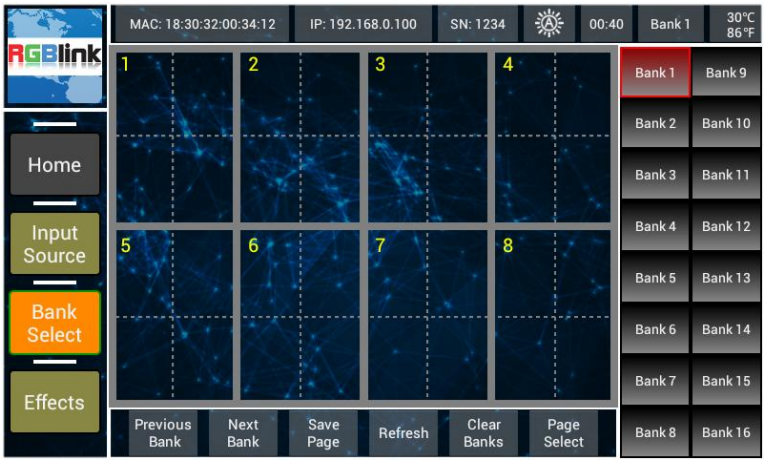
**Reset Input Wizard:** If image quality distorts by improper operation, it can be recover by Reset Input Wizard.

## Display Setup

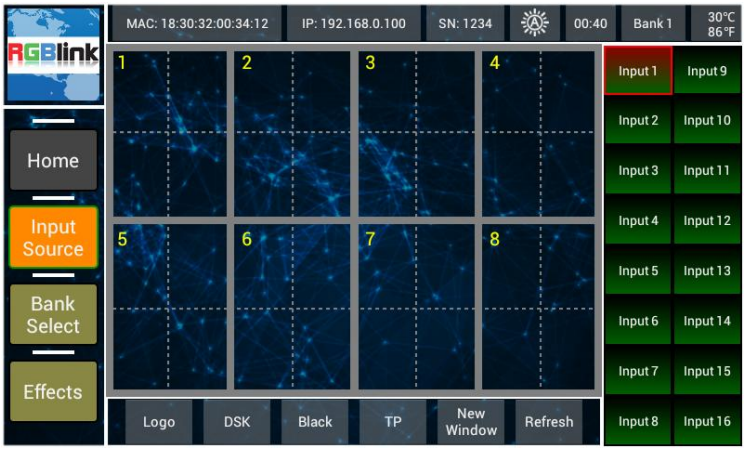
Touch the <Display Wizard> option in the main menu to go to the next menu. User can select the scene, setup the input source and effects.

# 4. Menu Orientation

MENU




Bank Select: Touch any button of Bank 1 to Bank 16 or touch “Previous Bank” or “Next Bank” to switch the scene. Touch “Save Page” to save all the edited bank to page 1 to page 16. Touch “Page Select” to call the saved page. User can also clear banks or refresh the page.




Input Source: Drag the input source to the output port to add new widows, also, user can touch “New Window” to add new widows. Click the widow, and double click the input source to edit the input image.

Logo: Touch <Logo>, it will pop up the logo setting interface, the operations are as follows:

In Logo Display, touch , it will pop up the pull-down menus, user can choose Logo 1~4 in the pull-down menus. Touch <Hide Loop> to cancel the logo display.

In Logo Capture, touch , it will pop up the pull-down menus, user can choose Logo 1~6 in the pull-down menus. User should freeze the

image when capture logo. Tick the little box in front of <Freeze ON/OFF> to freeze the image.

DSK: Touch <DSK>, it will pop up the DSK setting interface, the operations are as follows:

DSK: Tick the little box in front of

, user can enable the DSK function.

Preset: Touch the preset mode, for example:

, it will pop up the pull-down menus, user can choose the preset mode in the pull-down menus.

Mode: Touch the mode, for example:

, it will pop up the pull-down menus, user can choose 0 or 1 in the pull-down menus.

Alpha: Touch the parameters of alpha, for example:

, it will pop up the numeric keypad, user can set the parameters by the numeric keypad according to actual need, touch “√” on the numeric keypad after setting.

Color: Touch the parameters of color, for example:

, it will pop up the numeric keypad, user can set the parameters by the numeric keypad according to actual need, touch “√” on the numeric keypad after setting.

Touch <Apply> after setting.

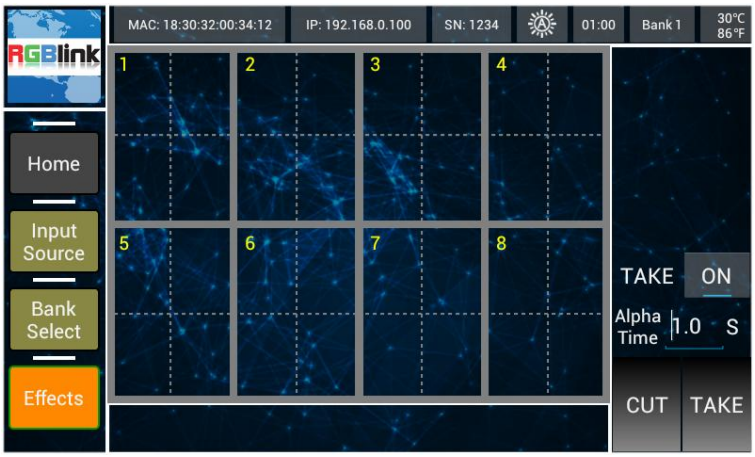
Black: Touch <Black>, the LED screen signal will be switched to black.

TP: Touch <TP>, the LED screen signal will be switched to TP.

Refresh: Touch <Refresh> to refresh the current page.

# 4. Menu Orientation

MENU




Effects: Touch the state of take, for example:

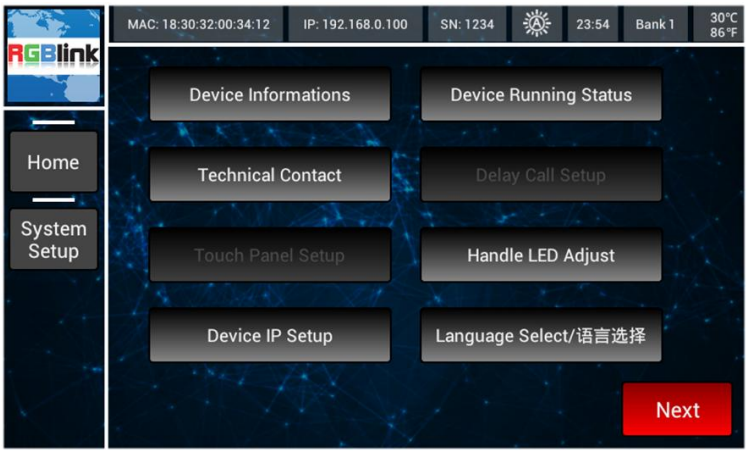
, user can enable or disable the effects function.

Alpha Time: Enable the effects function, touch the alpha time, for example:

, it will pop up the numeric keypad, user can set the alpha time by the numeric keypad according to actual need, touch "√" on the numeric keypad after setting. Touch <CUT> or <TAKE> button to seamless cut or fade in fade out the image to LED display.

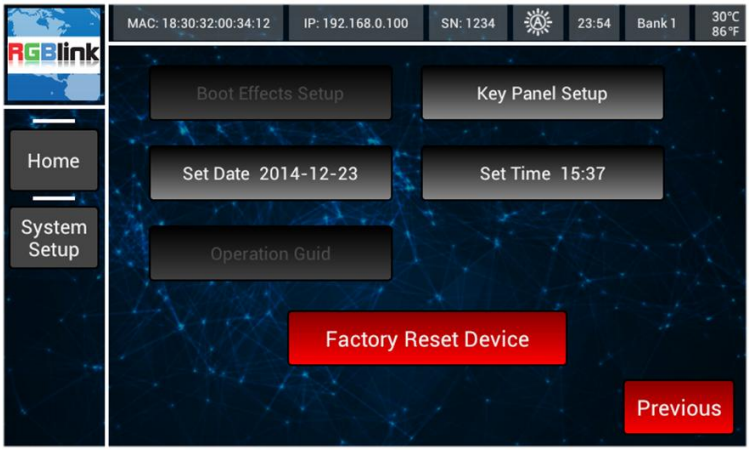
## System Setup

Touch the <System Setup> option in the main menu to go to the next menu. The menus are as follows:

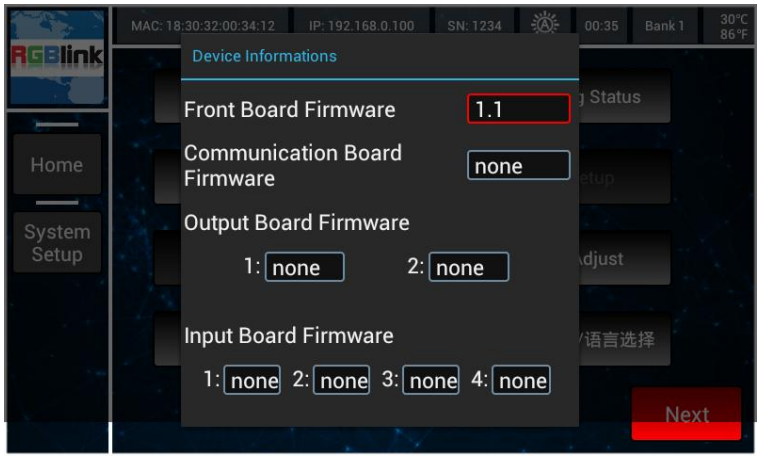


# 4. Menu Orientation

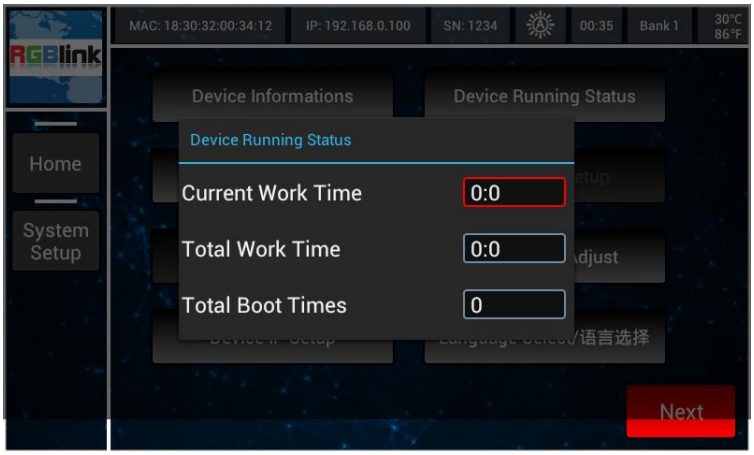
MENU




**Device Information:** Touch <Device Information>, it will show the firmware version of the device.



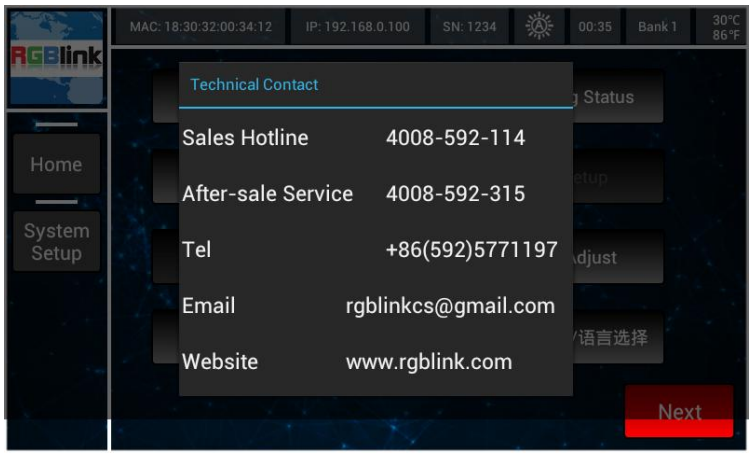

**Device Running Status:** Touch <Device Running Status>, it will show the work time and total boot times.



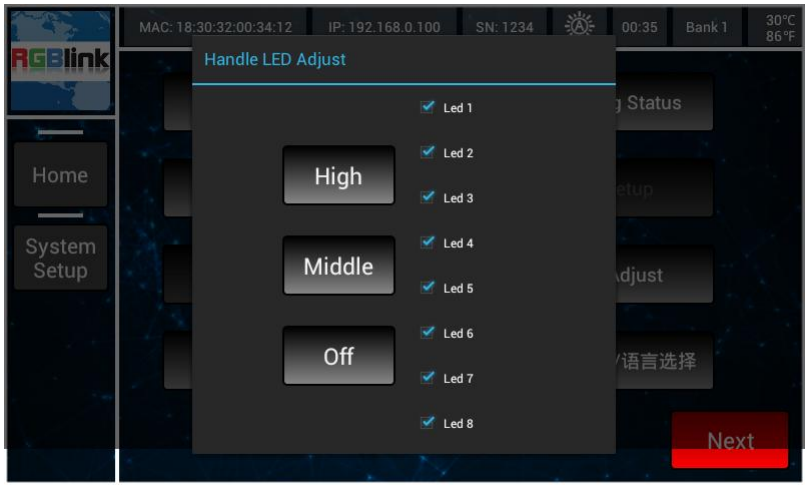

**Technical Contact:** Touch <Technical Contact>, it will show the sales hotline, after-sale service, telephone, Email and website.

# 4. Menu Orientation

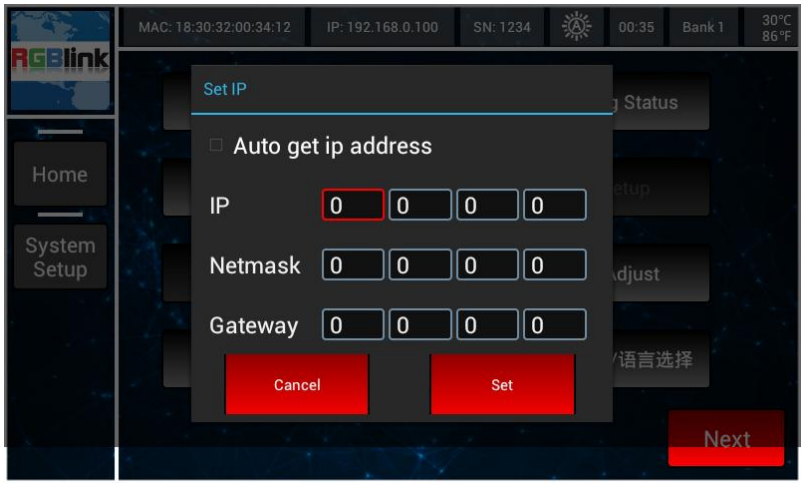
MENU




**Handle LED Adjust:** Touch <Handle LED Adjust>, user can choose the Led and set as “High” or “Middle”, touch “Off” to disable the function.



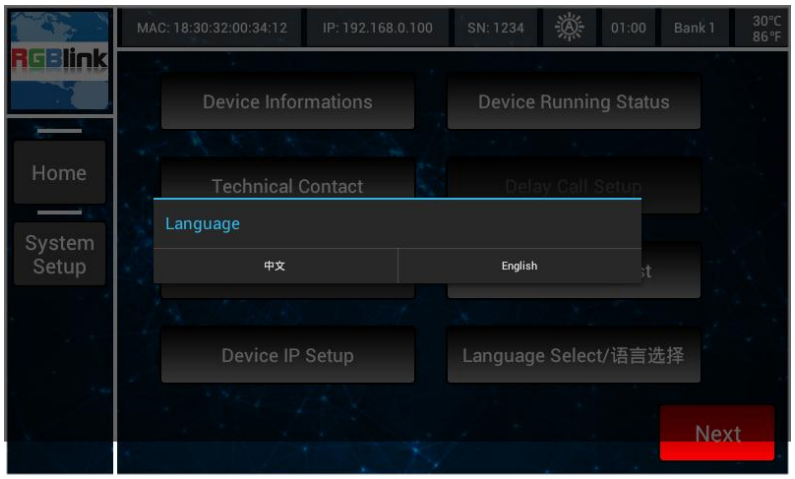

**Device IP Setup:** Touch <Device IP Setup>, user can set the IP, Netmask and Gateway.




**Language Select:** Touch <Language Select>, user can choose the language as Chinese or English.

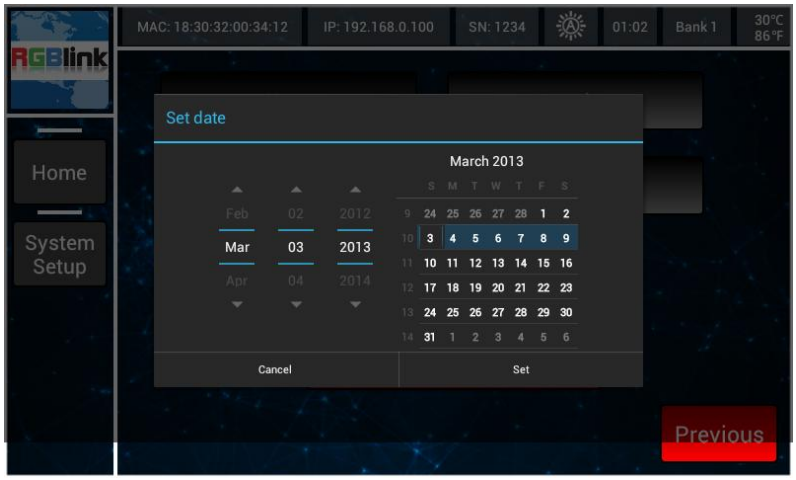
# 4. Menu Orientation

MENU

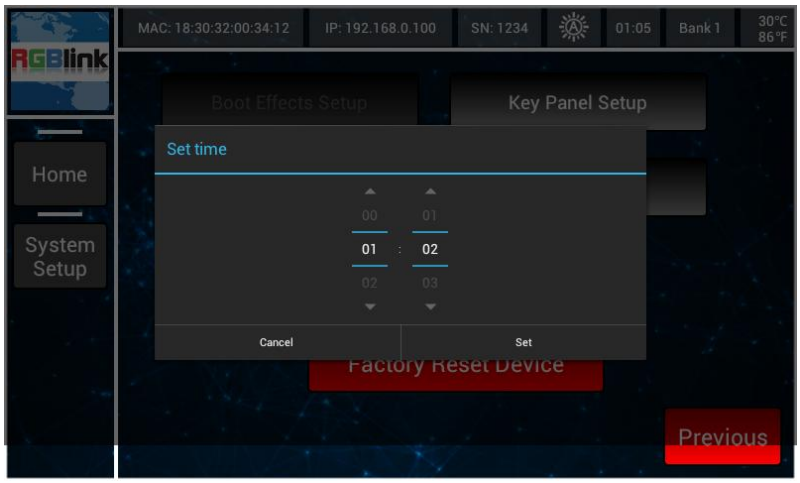



**Key Panel Setup.**

**Set Date:** Touch <Set Date>, user can set the date in the popup interface.




**Set Time:** Touch <Set Time>, user can set the time in the popup interface.




**Factory Reset Device:** If image quality distorts by improper operation, it can be recover by Factory Reset Device.

# 5. Communication Software Guideline

## In This Chapter

This chapter provides detailed information about the control communication software. The following topics are discussed:

- Software Installation
- Software Operation

## Software Installation

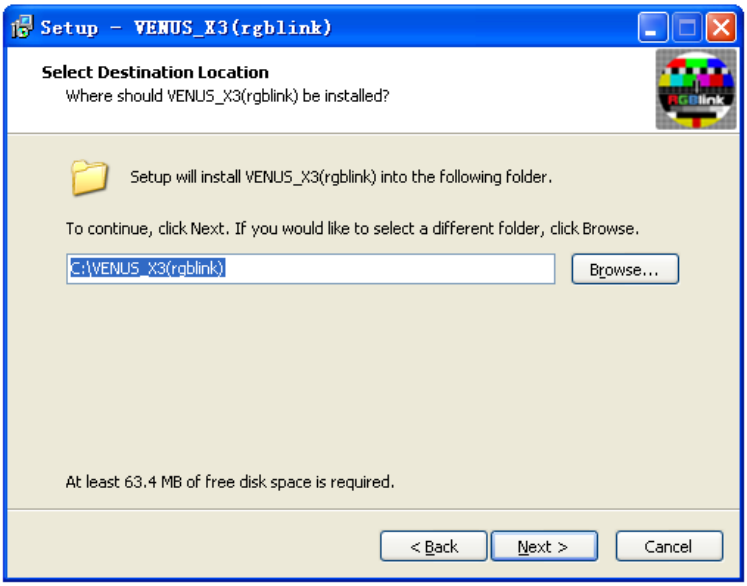
VENUS X3 video processor is very easy to configure with user friendly communication software, support drag and drop operation for edit and display.

Double click

to install, system default English version, click “Next” to next dialog:

Setup - VENUS_X3(rgblink)
Welcome to the
VENUS_X3(rgblink) Setup Wizard
This will install VENUS_X3(rgblink) version 1.5.3.3 on your computer.
It is recommended that you close all other applications before continuing.
Click Next to continue, or Cancel to exit Setup.
RGBlink
Next >
Cancel

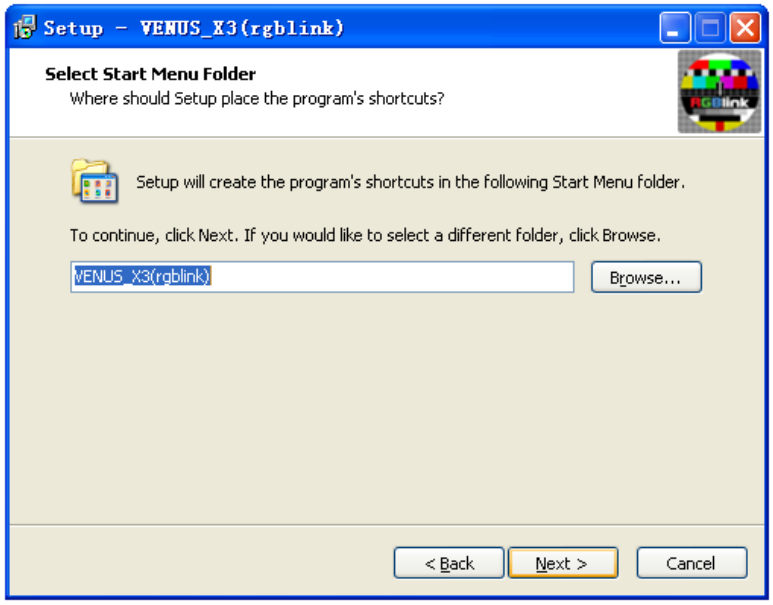
Select “Browse...” to choose the VENUS X3 software install path:


Setup - VENUS_X3(rgblink)
Select Destination Location
Where should VENUS_X3(rgblink) be installed?
Setup will install VENUS_X3(rgblink) into the following folder.
To continue, click Next. If you would like to select a different folder, click Browse.
C:\VENUS_X3(rgblink)
Browse...
At least 63.4 MB of free disk space is required.
< Back
Next >
Cancel

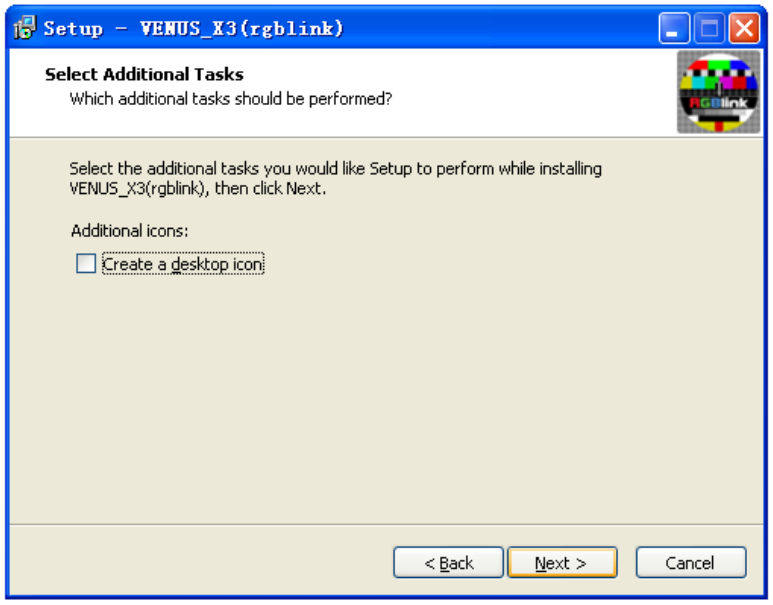
# 5. Communication Software Guideline

## Software Installation

Click “Next” to go on:


Setup - VENUS_X3(rgblink)
Select Start Menu Folder
Where should Setup place the program's shortcuts?
Setup will create the program's shortcuts in the following Start Menu folder.
To continue, click Next. If you would like to select a different folder, click Browse.
VENUS_X3(rgblink)
Browse...
< Back
Next >
Cancel

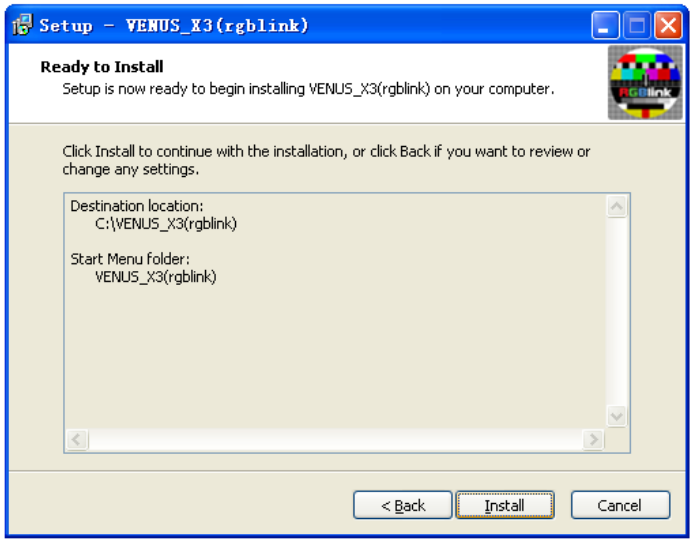
Click “Next” to go on:

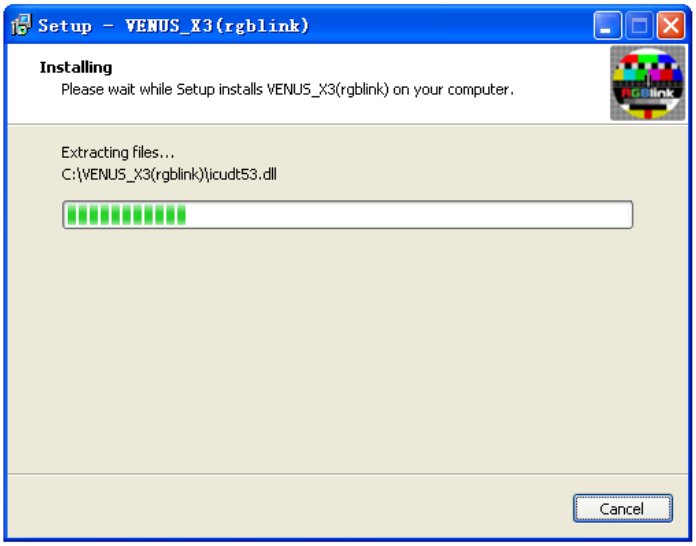

Setup - VENUS_X3(rgblink)
Select Additional Tasks
Which additional tasks should be performed?
Select the additional tasks you would like Setup to perform while installing VENUS_X3(rgblink), then click Next.
Additional icons:
Create a desktop icon
< Back
Next >
Cancel

Click “Install” to go on:

# 5. Communication Software Guideline

## Software Installation


Setup - VENUS_X3(rgblink)
Ready to Install
Setup is now ready to begin installing VENUS_X3(rgblink) on your computer.
Click Install to continue with the installation, or click Back if you want to review or change any settings.
Destination location:
C:\VENUS_X3(rgblink)
Start Menu folder:
VENUS_X3(rgblink)
< Back
Install
Cancel




Click “Finish” and ready to run VENUS X3 windows control program:

Setup - VENUS_X3(rgblink)
Completing the VENUS_X3(rgblink) Setup Wizard
Setup has finished installing VENUS_X3(rgblink) on your computer. The application may be launched by selecting the installed icons.
Click Finish to exit Setup.
Launch VENUS_X3(rgblink)
RGBlink
Finish

# Software Operation

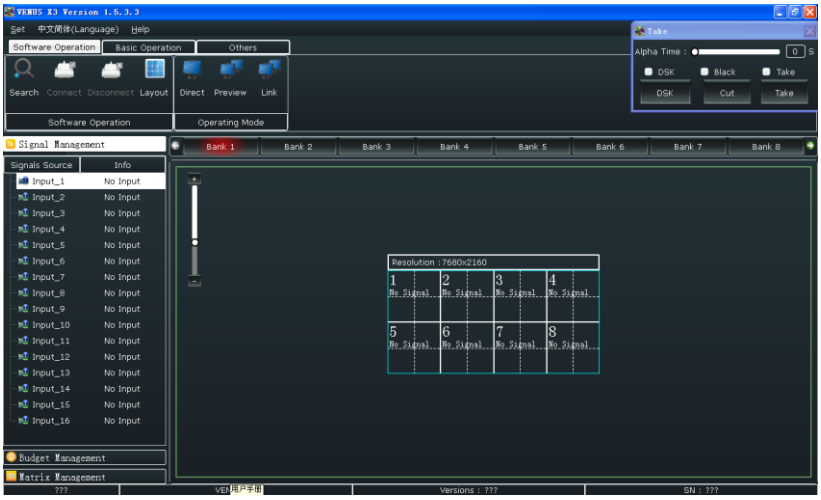
## Software Operation

### Connect

Double click the icon

on the desktop. Log in interface will be enter after opening, the user's name is admin, and there is no pass word, enter into the software by clicking "confirm".

VENUS X3 communication software interface is shown as follows.

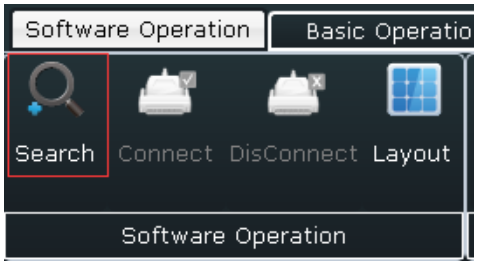



First, connect the VENUS X3 to the computer with the network cable, serial cable or USB cable, and open the device.

Then, choose "Search" in "Software Operation" area.

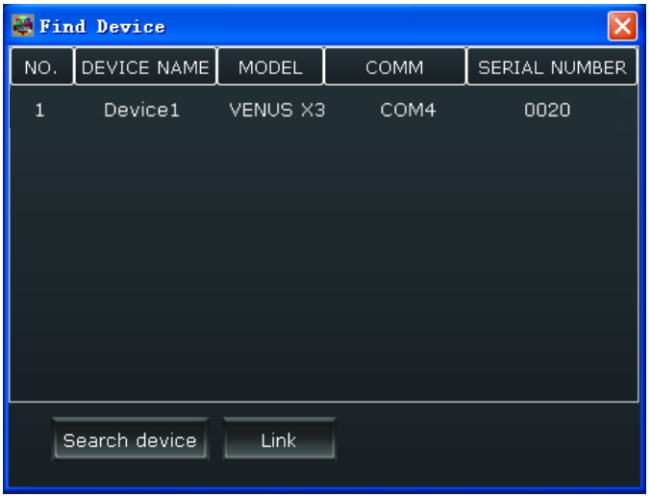
# 5. Communication Software Guideline

Software Operation




Enter to the software interface as below:

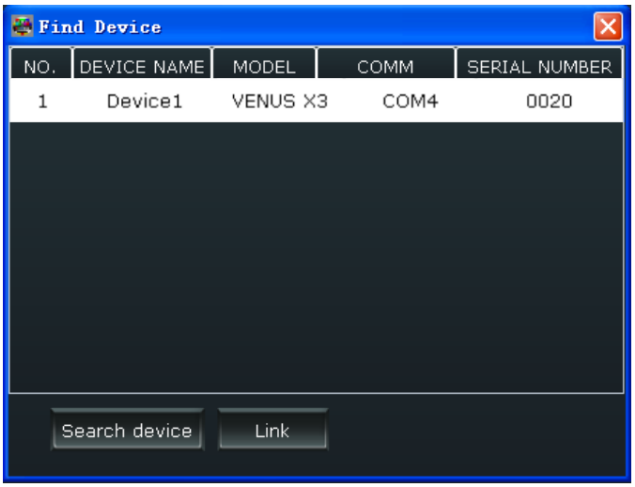
Click “Search Device”, and enter to the software interface as below:




Finally, choose device name, as shown below, then click “Link”, and finish connecting.

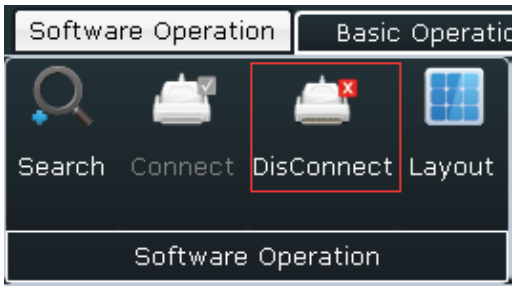
# 5. Communication Software Guideline

Software Operation



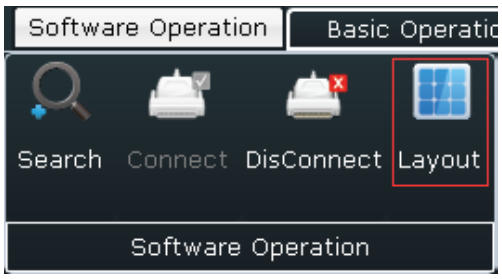

## Disconnect

Click the shortcut key “Disconnect” below “Software Operation” to disconnect the device.




## Layout

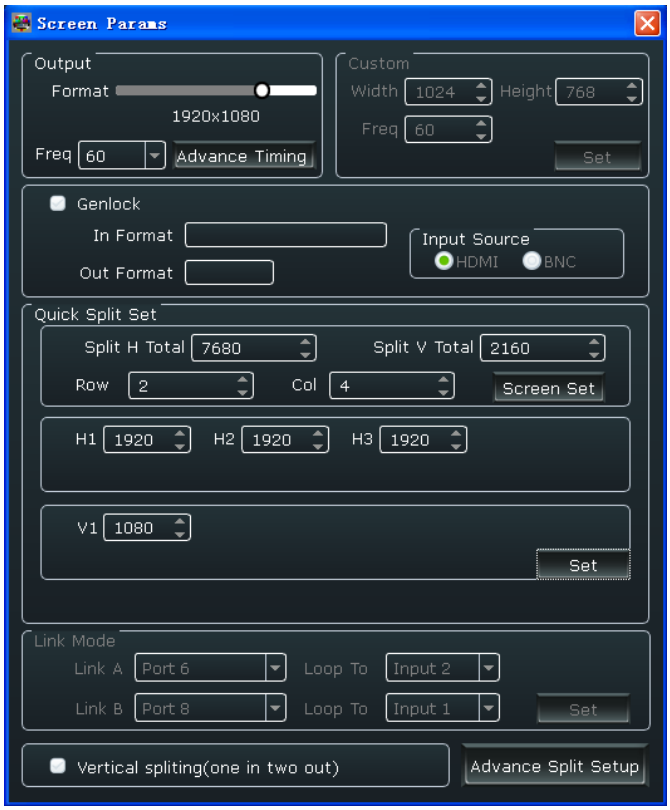
Click the shortcut key “Layout” below “Software Operation”.




Enter to the software interface as below:

# 5. Communication Software Guideline

Software Operation




**Output:** Choose the output format according to actual need. “Advance Timing” can change various parameter value of output screen, click “Set” after changing. The software interface is shown as follows:

**Custom:** If choose “Custom” in Output, user can set custom resolution.

**Genlock:** Choose the genlock format.

**Input Source:** Choose input source as HDMI or BNC.

**Vertical spliting (one in two out):** It is mainly for doing vertical split with dual

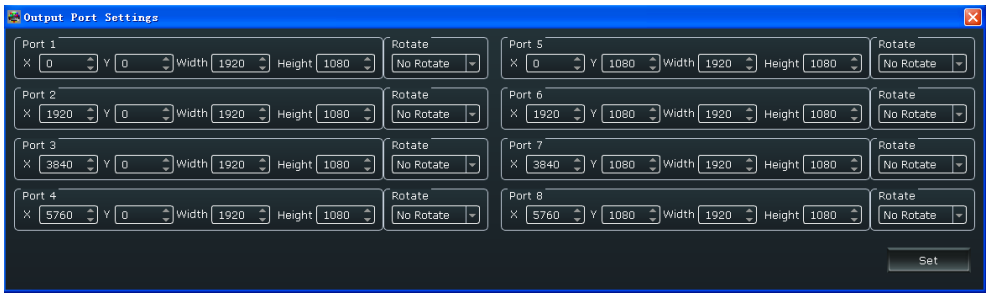
graphics cards computer.

**Quick Split Set:** Set the split H total, split V total, row and column, the output screen support max 2 rows and 4 columns, user can set the width and height of the output screen.

**Link Mode:** The link mode can achieve 5 pictures to 5 pictures seamless switching. It needs to connect output 6 and output 8 to the corresponding DVI inputs with two DVI cables, system default input 1 and input 2, then choose “port 6” Loop To “Input 1”, “port 8” Loop To “Input 2” in the screen params window of the windows control program.

**Vertical spliting (one in two out):** It is mainly for doing vertical split with dual graphics cards computer.

**Advance Split Setup:** Choose the port, and set X, Y, Width, Height and Rotate.




## Operating Mode

: Output the signal to LED display.

: Output the signal to the monitor, click “Take” or “Cut” in “Take” box to seamless switch the signal to LED display. If select “Take Out” or “Black”, the preview image will seamless switch or black to LED display instantaneously. System default outputs 2.4.6.8 as preview channel and outputs1.3.5.7 as program channel.

# 5. Communication Software Guideline

Software Operation

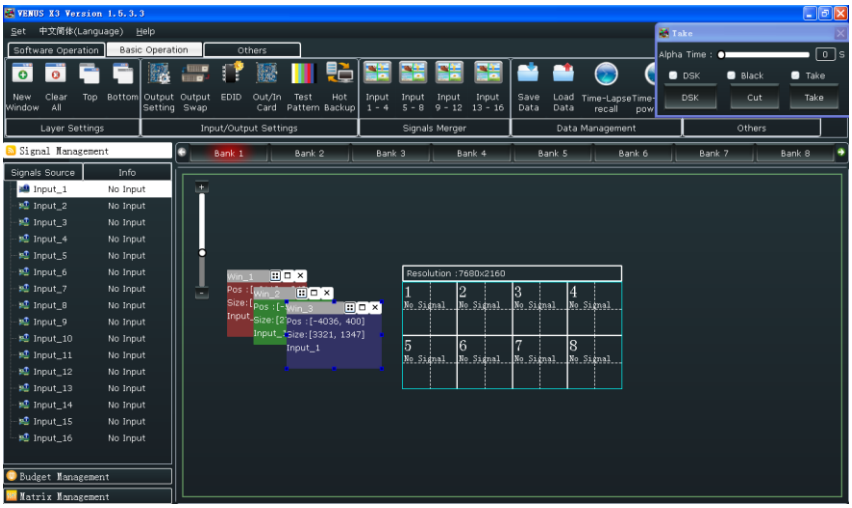
: The link mode can achieve 5 pictures to 5 pictures seamless switching. It needs to connect output 6 and output 8 to the corresponding DVI inputs with two DVI cables, system default input 1 and input 2, then choose “port 6” Loop To “Input 1”, “port 8” Loop To “Input 2” in the screen params window of the windows control program.

## Basic Operation

### Layer Settings

**New Window:** In output screen zone of controlling software, press the left mouse key and drag on the intended output screen to cover the whole current screen. And the below interface will be displayed. A window can be opened by click the shortcut key of “New Window”

, or double click the left signal source to be shown on the window.




**Paste Layer:** Put the mouse on the window to be copied, right click the mouse, select “Copy Layer”, then right click in output screen zone of controlling software, and select “paste Layer”.

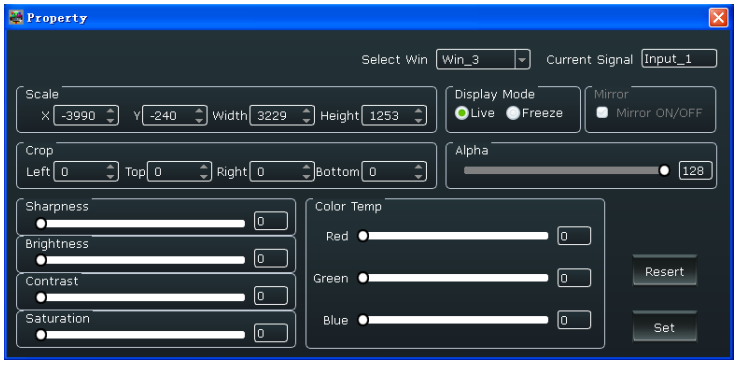
# 5. Communication Software Guideline

## Software Operation

**Adjust Window:** Two ways can change the size and location of the opened window:

a. Drag and drop the opened window by mouse. The details are: move the mouse to the lower right brink of the opened window, when the mouse shows"<—>", press the left key of the mouse and drag the window to a suitable size and then release the mouse. Move the mouse to the opened window and press the left key of the mouse and move the mouse, then the window will be moved, release the mouse when moved to the suitable location. But this method can only adjust the size and location roughly; if an accurate adjustment is needed, the second method can be used.

b. Put the mouse on the window to be adjusted, right click the mouse. Select the "Property" and the exemplary interface will appear, adjust precisely by "X", "Y", Width" and "Height'.




**Full or Close Window:** Click the icon " " at the upper right corner to full cell and click the icon " " at the upper right corner to full screen. Or put the mouse on the window to be adjusted, right click the mouse, select the "Full Cell" or "Full Screen".

When a window needs to be closed, click the icon " " at the upper right corner, or put the mouse on the window to be closed, right click the mouse, select the "Close". If all windows need to be closed, click the shortcut key

# 5. Communication Software Guideline

Software Operation

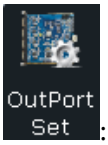
“ ”, or put the mouse on any window, right click the mouse, select the “Close All”.

**Hierarchical relations between windows:** After creating the windows, the hierarchical relations can be changed by the following: click the shortcut key

” or “

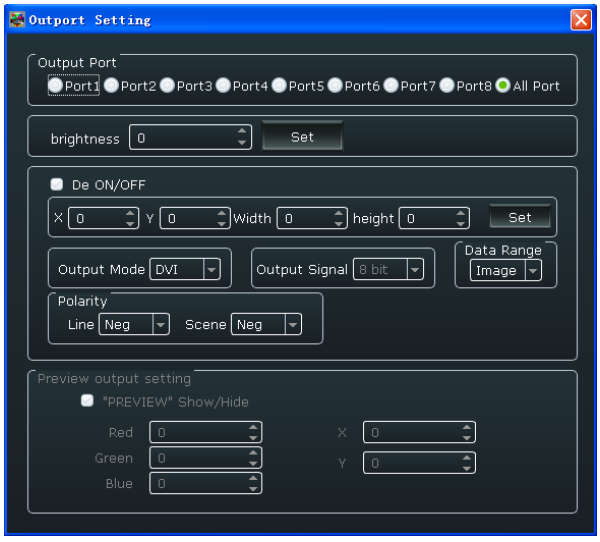
”. Or put the mouse on the window to be adjusted, right click the mouse, select the “Bring layer to Front”, “Send layer to Back”, “Layer Forward” or “Layer Backward”, the window can also be set as BackGround.

## Input/Output Settings



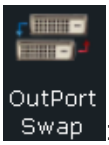

: Out Port Set, user can choose one port or choose all ports and set the DE. X, Y, Width, Height, and choose output mode, output signal, data range and polarity.

The “Preview output setting” is valid in preview mode. User can choose show or hide the preview text, red, green, blue is the color of the text, and X, Y is the position of the text.

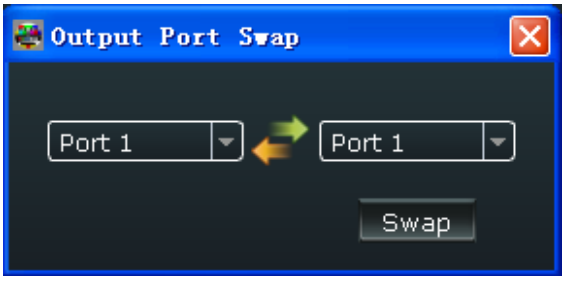


# 5. Communication Software Guideline

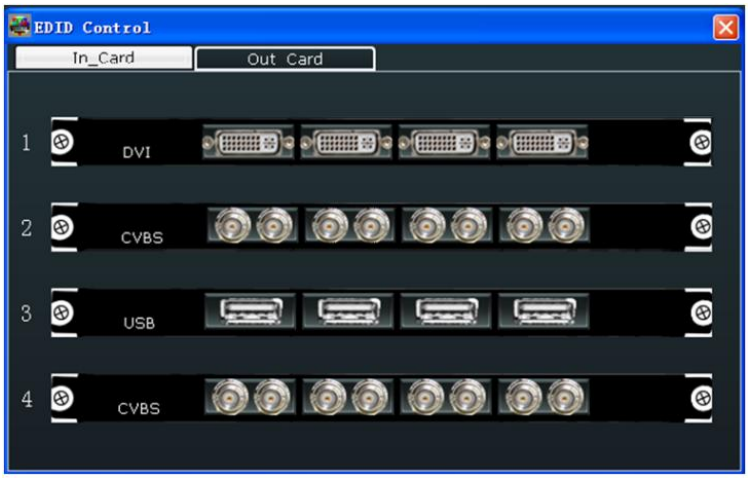
Software Operation




: Click the Out Port Swap shortcut key, or put the mouse on the output to be adjusted, right click the mouse, select “Out port Swap” to swap the out ports.



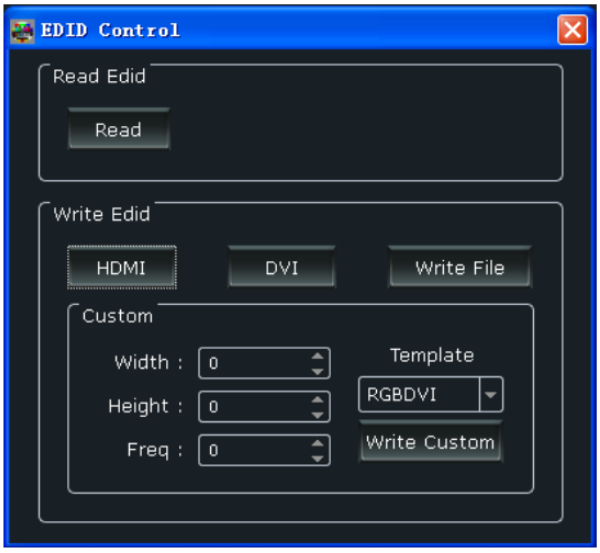
: The special display project or LED display application would like to require special resolution settings to meet the requirement. The interface is as follows:

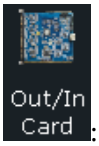



Choose In_Card or Out Card, and click any input port to read or write EDID.

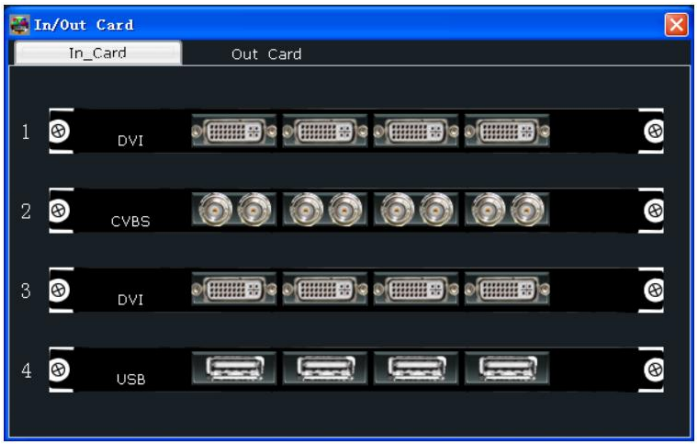
# 5. Communication Software Guideline

Software Operation



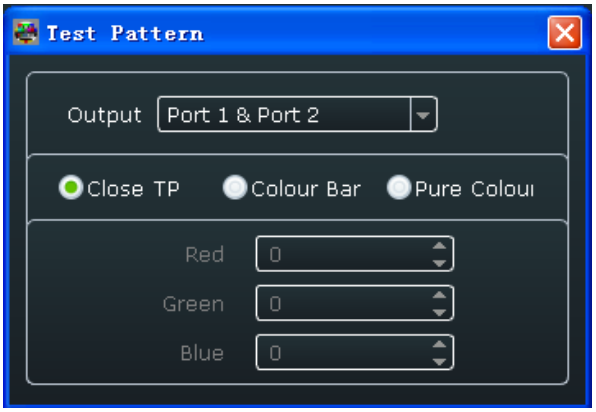

: Show the information of input or output card.

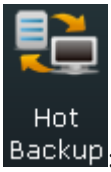


: User can open or close the TP function, choose the output port, and choose color bar or pure color. User need to set the red, green and blue value if choose pure color.

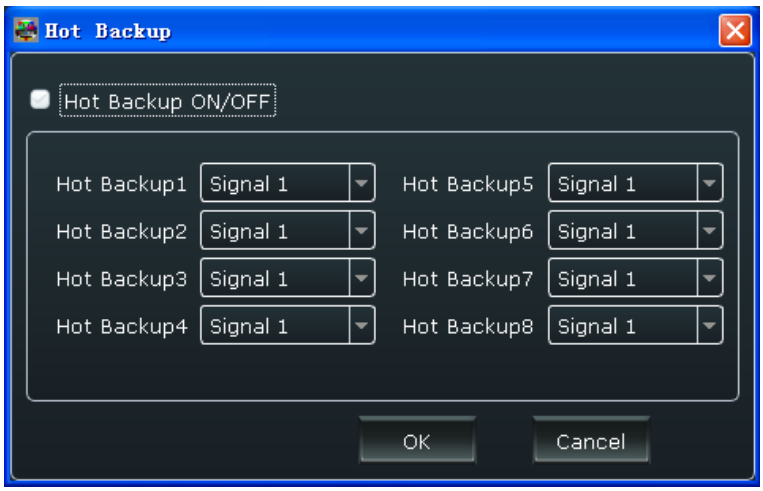
# 5. Communication Software Guideline

Software Operation

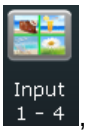



: User can enable or disable the hot backup function. Choose “ON” to set the backup signal for Hot Backup 1 to Hot Backup 8. It will switch to the backup signal if interrupt signal.



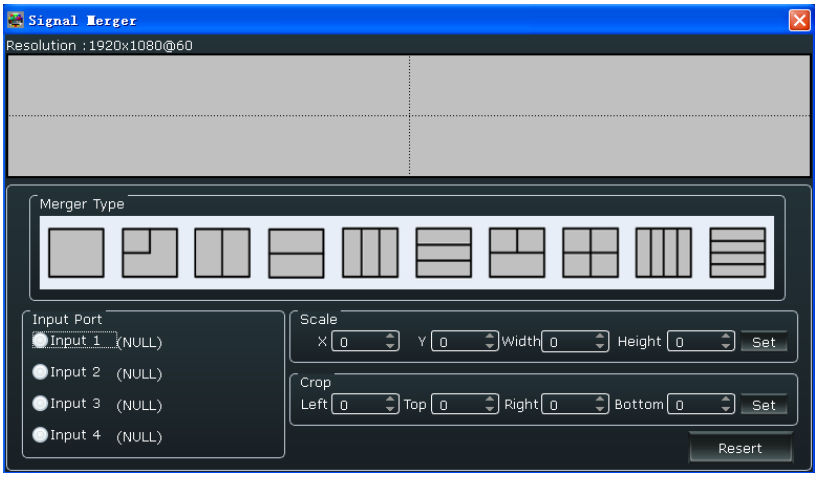

## Signals Merger

The DVI and S-HDMI input optional module support signal merger. Click any input port, for example, click 

, and the below interface will be displayed, choose the merger mode and input port, and scale and crop the size. If image quality distorts by improper operation, it can be recover by reset.

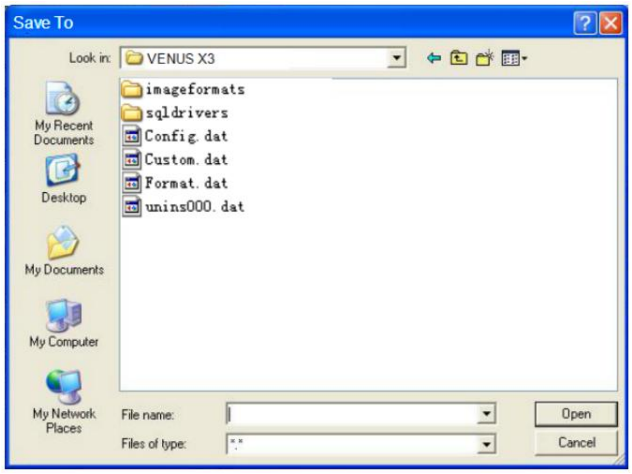
# 5. Communication Software Guideline

Software Operation




## Data Management

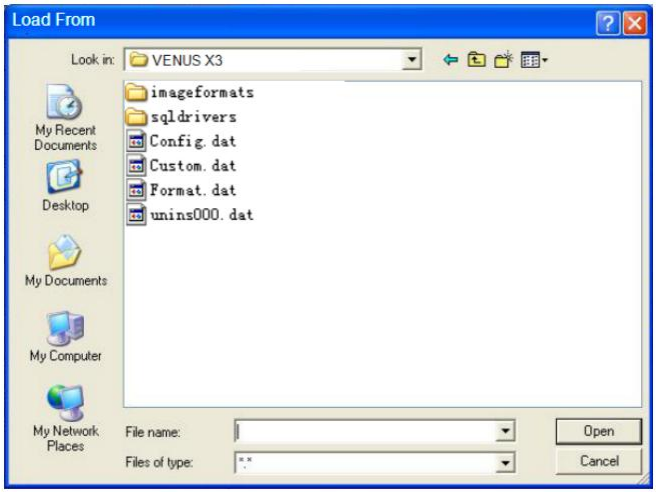
: Save the data to the computer hard drive.



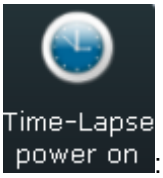
: Load the data from the computer.

# 5. Communication Software Guideline

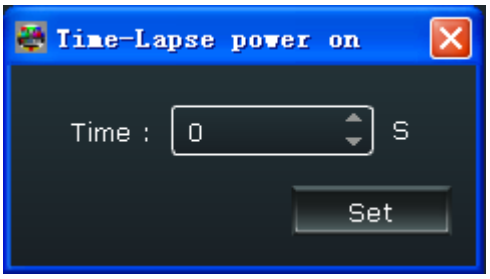
Software Operation



: Set the time-lapse recall time, and choose the bank that will load.



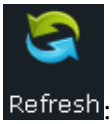

: Set the time-lapse power on time.



# 5. Communication Software Guideline

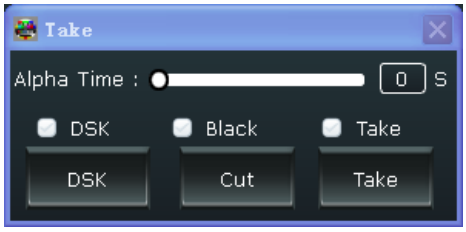
Software Operation

## Other



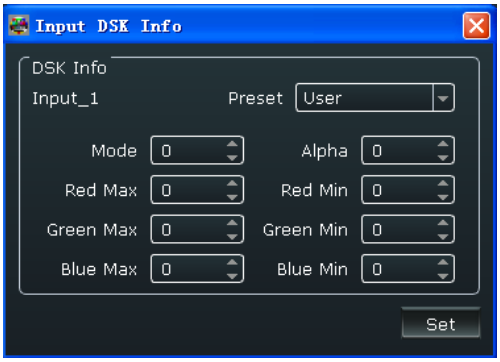
: Refresh the current page.

: Click the shortcut to show or hide the take window, the take window shows as follows:




Set the alpha time, the adjustment range is 0~10S.

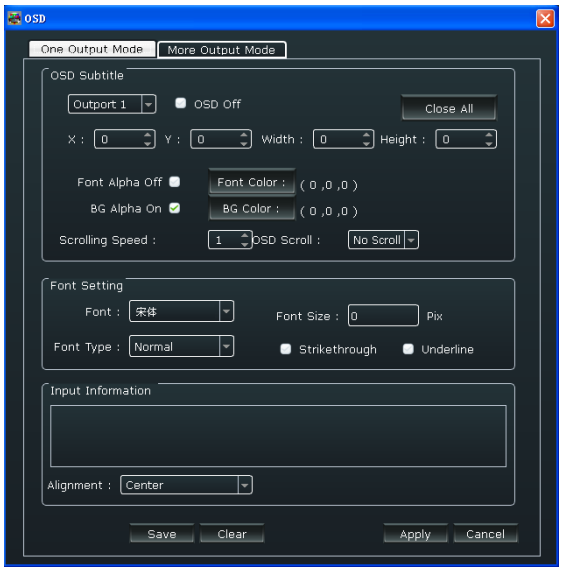
Click “ Advance” in “Take” box, and set the DSK parameters in the dialog, including preset, mode, alpha and color.




Click “Take” or “Cut” in “Take” box to seamless switch the preview signal to LED display. If select “Take ON” or “Black ON”, the preview image will seamless switch or black to LED display instantaneously.

OSD: Put the mouse in output screen zone of controlling software, right the

mouse, select “OSD”, and the below interface will be displayed. Select One Output Mode or More Output Mode, and set the following items.

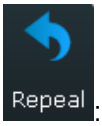



OSD Subtitle: Enable or disable the OSD function. When choose “ON”, choose the output port, and set the size, position, font alpha, font color, scrolling speed and OSD scroll mode.

Font Setting: Set the font, font size, font type, user can also choose the strike through or underline.

Input Information: Input the information and choose the alignment.

Click “Save” and “Apply” after setting.



: Repeal the last level operation.

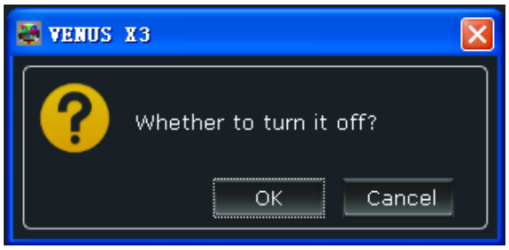
## Other

### Power

: Click “Power Off” icon, the system will prompt “Whether to turn it off”, click “Yes” to close the device.

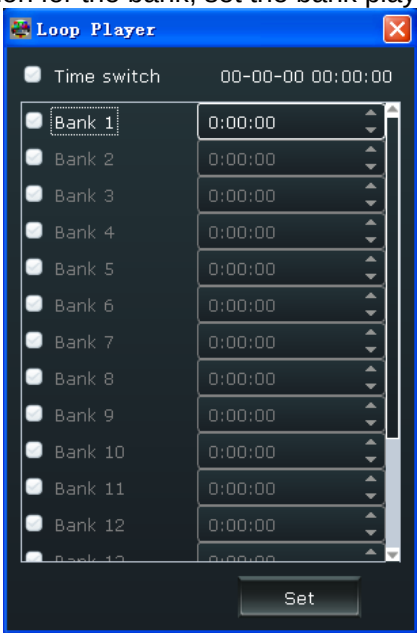
# 5. Communication Software Guideline

Software Operation




## Bank

: Loop function for the bank, set the bank play time.

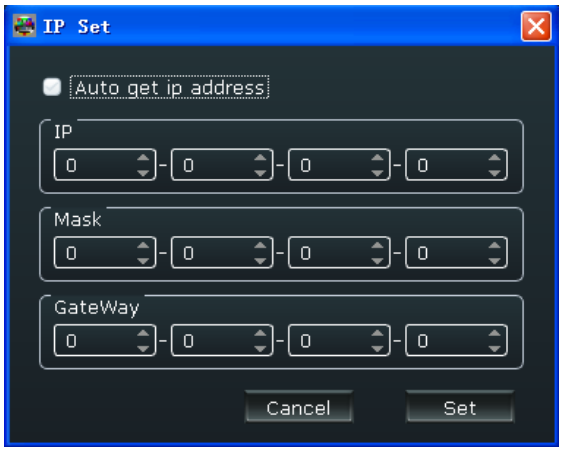


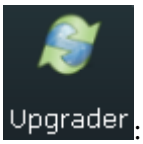

## Factory Settings

: Reset to factory settings.

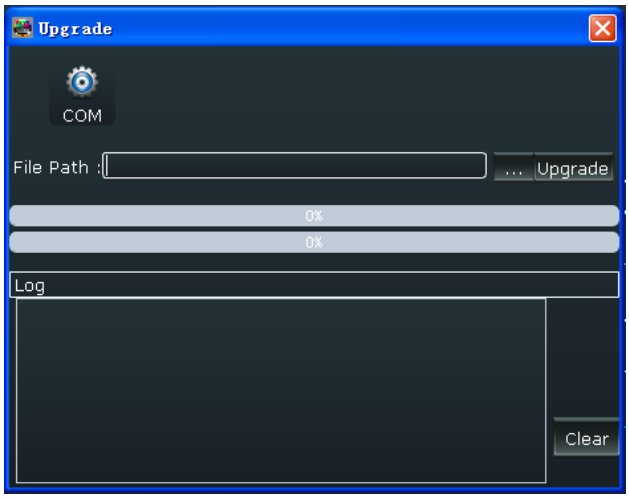
: Users can set equipment IP, mask and gateway, usually used when one computer control some devices or remote control. It takes effect immediately if users change IP through serial port, and if change IP through network, it takes effect after reopen the software. If choose “Auto get ip

address", user need not set the IP.

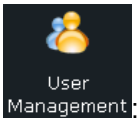


: Update the device, and user can clear the log.



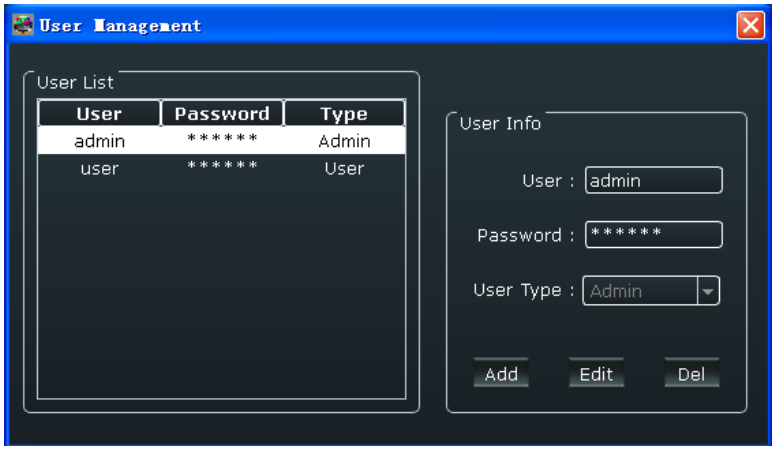

## User Settings



: Operation permissions settings for manager, log in and set the log password of windows control program.

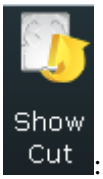
# 5. Communication Software Guideline

Software Operation

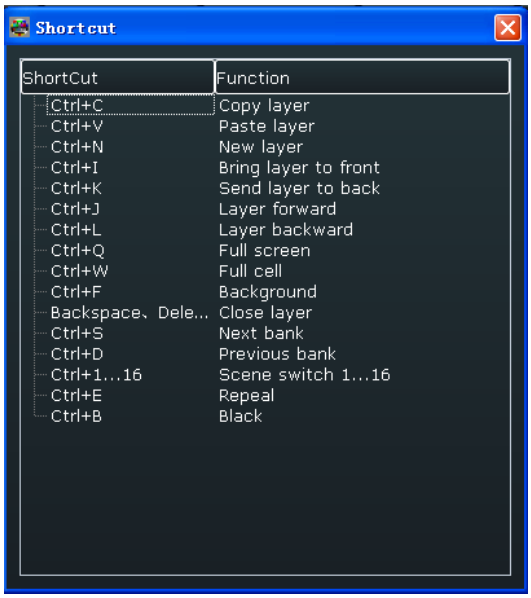


: Stage template select, VENUS X3 version 1.4 can not support this function.

## Others



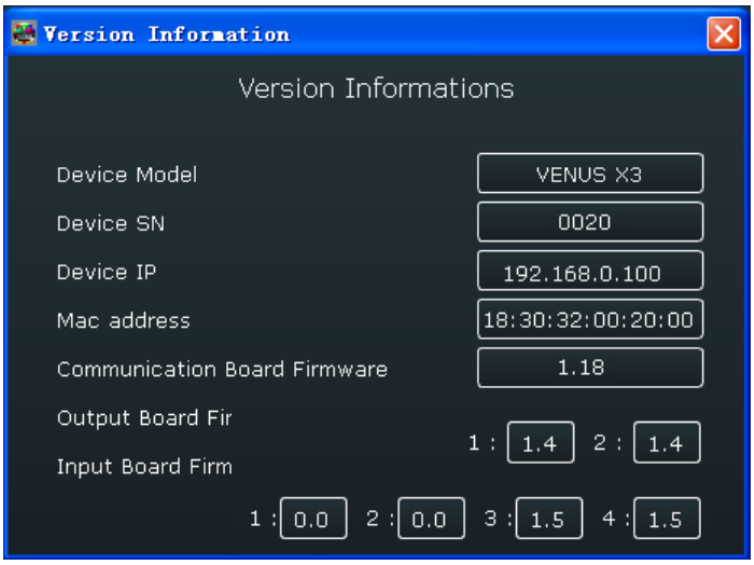
: Use shortcut key to operate fast and easily.

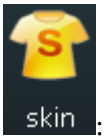


# 5. Communication Software Guideline

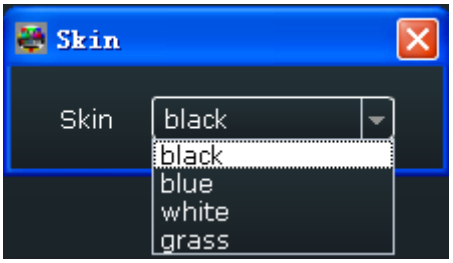
Software Operation

: Show the device version information.



: Can choose the skin as black, blue, white or grass.



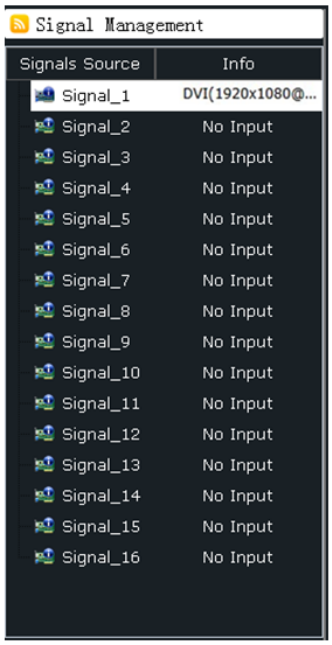

## Control Interface

### Signal Management

Connect the device, and it will show the output format below “Info”.

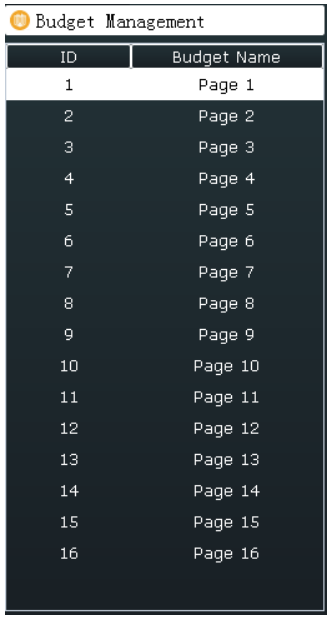
# 5. Communication Software Guideline

Software Operation




## Budget Management

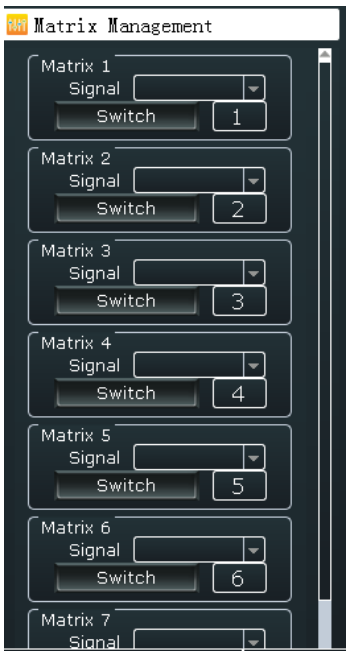
Right click the page name, user can save the settings to page, or open the saved page. VENUS X3 supports 16 kinds of pages. User can also edit the page's name and clear one page or clear all pages.




## Matrix Management

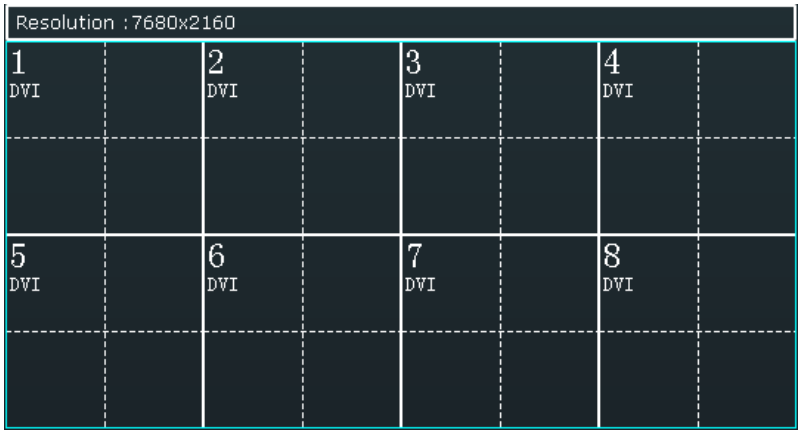
In matrix mode, any operations are unavailable except signal selection and bank selection. Choose the signal, then click "Switch", the signal will be switched to the corresponding output. Connect the signal to the corresponding output after

setting.




## Output Channel

One bank support max 8 output screens, the output channel support 16 scenes.

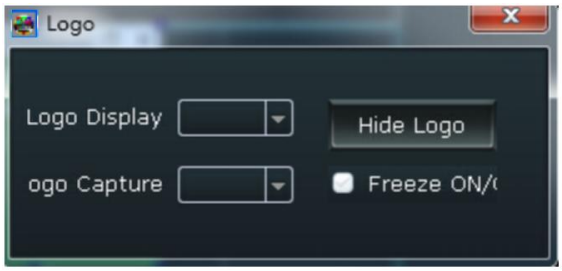



## Grab/Display Logo

Put the mouse on the signal, right click the mouse, select the “Grab/Display Logo”, user can capture logo. VENUS X3 max supports 10 logos capture. Freeze the image when capture logo. User can choose display or hide the logo in the image.

# 5. Communication Software Guideline

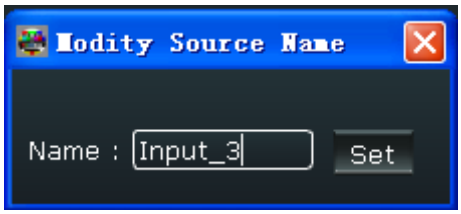
Software Operation




## Modify the Name

The device can modify source and bank name, for easy identification and management.

**Modify Source Name:** Put the mouse on the signal, right click the mouse, select the “Modify the Name”, input the new name in the dialog.




**Modify Bank Name:** Put the mouse on the bank, right click the mouse, select the “Modify Name”, and input the new name in the dialog.

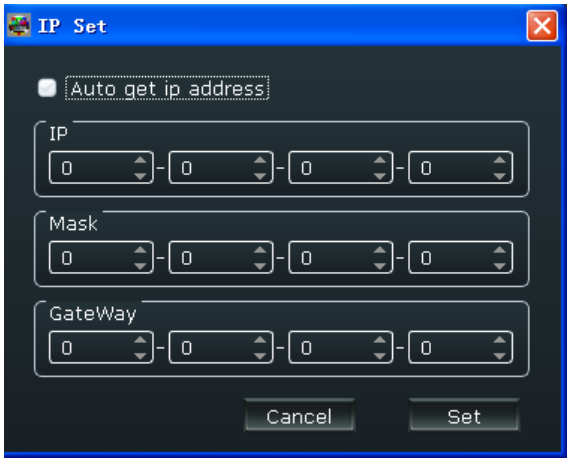
## Set

### IP Set

Users can set equipment IP, mask and gateway, usually used when one computer control some devices or remote control. It takes effect immediately if users change IP through serial port, and if change IP through network, it takes effect after reopen the software. If choose “Auto get ip address”, user need not set the IP.

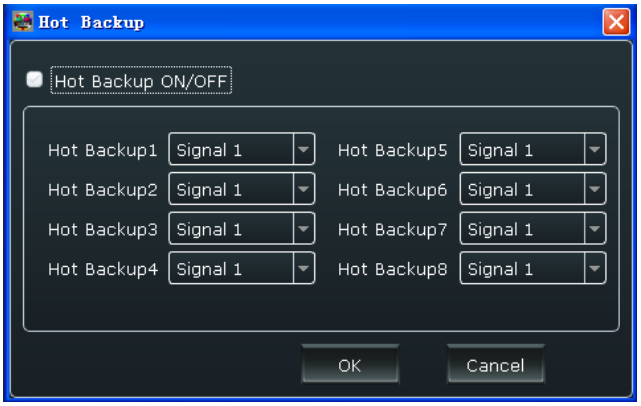
# 5. Communication Software Guideline

Software Operation



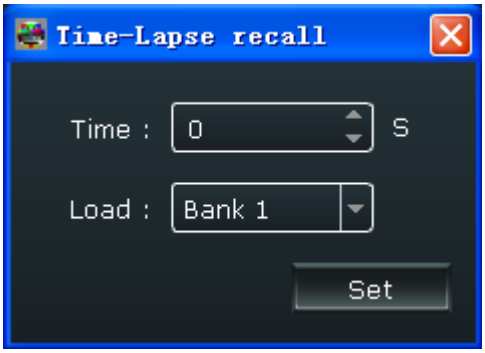

## Hot Backup

User can enable or disable the hot backup function. Choose “ON” to set the backup signal for Hot Backup 1 to Hot Backup 8. It will switch to the backup signal if interrupt signal.




## Time-lapse Recall

Set the time-lapse recall time and choose the bank that will load.



# 5. Communication Software Guideline

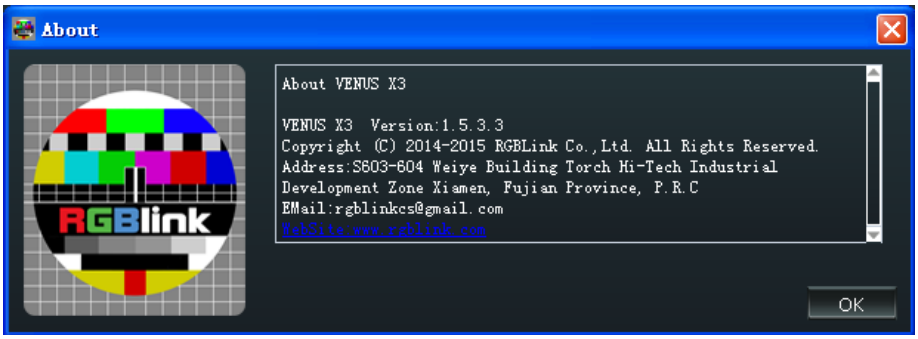
Software Operation

## Language

The software supports both Chinese and English, user can switch the language by “Language” option.

## Help

**About:** The information of the software version and the company.




## Information Toolbar

It shows the serial, device name, software version and serial number in the bottom of the software interface.

# 6. Common Questions and Solutions

## In This Chapter

This chapter provides the common questions and solution for the video processor. The following topics are provided:


- It Prompts "Eauipment is not found, please check the cable" When Search Device in Windows Control Program
- Some Inputs can Adjust the Quality While Some not
- How to Adjust the Brightness of All Ports
- The Operation on Windows Control Program is Inconsistent with Actual Output after Operate on Front Panel or Mixer
- Some Signals Merger Icons can be Operated While Some not
- There is no Output Image when Choose Link Mode
- Some Input Cards are Grey when Write EDID

# 6. Common Questions and Solutions

## It Prompts "Eauipment is not found, please check the cable" When Search Device in Windows Control Program

The logic of the USB control port is missing, it may be caused by reboot the device without disconnect after connect the windows control program. User need to pull and plug the USB cable that connect the computer and VENUS X3.

## Some Inputs can Adjust the Quality While Some not

Currently, only asynchronous input cards, such as VGA, USB, CVBS, HDMI and SDI cards support the brightness, sharpness, contrast, saturation and color temperature adjustment. In order to ensure the synchronicity of multiple-input multiple-output split, the synchronous input cards, such as DVI, S-HDMI and S-SDI cards can not currently support.

## How to Adjust the Brightness of All Ports

User can adjust the brightness of all ports by the windows control program, the operations are as follows: click the “Output Setting” in “Basic Operation” area, it will pop up the output setting window, choose “All Port”, and set the brightness in the brightness box. The adjustment range is 0~128. Click “Set” after setting.

# 6. Common Questions and Solutions

## The Operation on Windows Control Program is Inconsistent with Actual Output after Operate on Front Panel or Mixer

In order to ensure the diversity of device control and can multi-point simultaneous control, besides front panel, VENUS X3 can be operated on the mixer and windows control program at the same time, and achieve multipoint control. But in order to ensure the stability and rapid response when control the device, the mixer or windows control program that connected to VENUS X3 can not automatically synchronize the VENUS X3 operation without control. So user need to refresh the current control device or interface when change the control device. For windows control program, click the “Refresh” icon in “Basic Operation” area, and for mixer, touch the connected device serial number in communication area.

## Some Signals Merger Icons can be Operated While Some not

Signals merger is the application that to solve the more pictures need for some customers. Signals merger only support the synchronous input cards, such as DVI, S-HDMI and S-SDI cards, other input cards are not currently supported.

# 6. Common Questions and Solutions

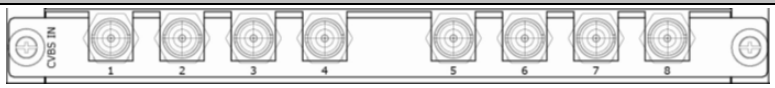
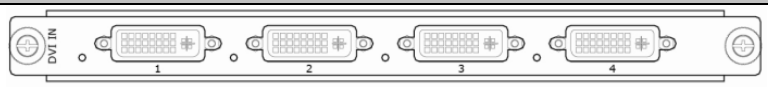
## There is no Output Image when Choose Link Mode

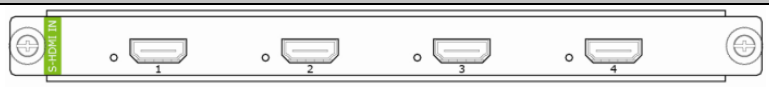
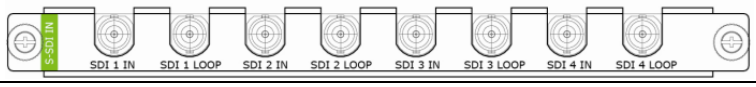
The link mode can achieve 5 pictures to 5 pictures seamless switching. It needs to connect output 6 and output 8 to the corresponding DVI inputs with two DVI cables, system default input 1 and input 2, then choose “port 6” Loop To “Input 1”, “port 8” Loop To “Input 2” in the screen params window of the windows control program.

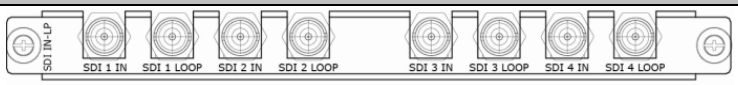
## Some Input Cards are Grey when Write EDID

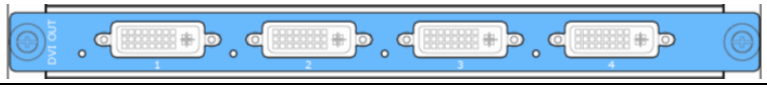
EDID only supports DVI, HDMI and VGA input cards as to its particularity, there is no EDID in other input cards, and can not read or write EDID, so they are grey.

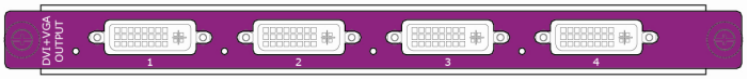
# A. Specification

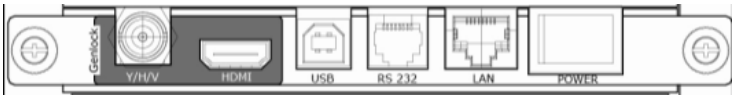
| | |
|---|---|
| **CVBS Input Module** | |
| Interface Appearance |  |
| Board Size | 216(L)×20(W)（mm） |
| Number of Inputs | 8 |
| Connector | Standard BNC Socket |
| Supported Standards | PAL I NTSC I SECAM |
| Signal Level | 1Vpp±3db (0.7V Video+0.3v Sync ) 75 ohm |
| Multiplex | 480i I 576i |
| **VGA Input Module** | |
| Interface Appearance | |
| Board Size | 216(L)×20(W)（mm） |
| Number of Inputs | 4 |
| Connector | Standard DB15 Socket |
| Supported Standard | VGA-UXGA |
| Signal Level | R、G、B、Hsync、Vsync:0 to1Vpp±3dB (0.7V Video+0.3v Sync ) 75 ohm<br>black level: 300mV Sync-tip: 0V |
| Supported Resolution | VGA-UXGA (800×600@60 I 1024×768@60 I 1280×1024@60 I 1440×900@60 I 1600×1200@60) |
| **DVI Input Module** | |
| Interface Appearance |  |
| Board Size | 216(L)×20(W)（mm） |
| Number of Inputs | 4 |
| Connector | Standard DVI-I socket |
| Supported Resolution | SMPTE: 625/25/50 PAL, 525/29.97/59.94 NTSC,<br>1080P50/59.94/60 I 1080i50/59.94/60 I 720p50/59.94/60<br>VESA: 800×600@60 I 1024×768@60 I 1280×768@60 I<br>1280×1024@60 I 1600×1200@60 I 1920×1080@60 |
| Signal Level | TMDS pwl, single pixel input,165MHz bandwidth |
| Format Standard | HDMI 1.3 |
| **USB Input Module** | |
| Interface Appearance | |
| Board Size | 216(L)×20(W)（mm） |
| Number of Inputs | 4 |
| Connector | Standard USB port |

| | |
|---|---|
| Supported Standard | Support general Image and video formats |
| **HDMI Input Module** | |
| Interface Appearance | |
| Board Size | 216(L)×20(W)（mm） |
| Number of Inputs | 4 |
| Connector | HDMI standard type A interface |
| Supported Resolution | SMPTE: 625/25/50 PAL, 525/29.97/59.94 NTSC,<br>1080P50/59.94/60 I 1080i50/59.94/60 I 720p50/59.94/60<br>VESA: 800×600@60 I 1024×768@60 I 1280×768@60 I<br>1280×1024@60 I 1600×1200@60 I 1920×1080@60 |
| Embedded Audio Channels | Choose one from the two inputs |
| Format Standard | HDMI 1.3 |
| **S-HDMI Input Module** | |
| Interface Appearance |  |
| Board Size | 216(L)×20(W)（mm） |
| Number of Inputs | 4 |
| Connector | HDMI standard type A interface |
| Supported Resolution | SMPTE: 625/25/50 PAL, 525/29.97/59.94 NTSC,<br>1080P50/59.94/60 I 1080i50/59.94/60 I 720p50/59.94/60<br>VESA: 800×600@60 I 1024×768@60 I 1280×768@60 I<br>1280×1024@60 I 1600×1200@60 I 1920×1080@60 |
| Embedded Audio Channels | Choose one from the two inputs |
| Format Standard | HDMI 1.3 |
| **S-SDI Input Module** | |
| Interface Appearance |  |
| Board Size | 216(L)×20(W)（mm） |
| 3G-SDI Input | |
| Number of Inputs | 4 |
| Connector | BNC |
| Data Rate | 2.97Gb/s, 2.97/1.001Gb/s, 1.485Gb/s, 1.485/1.001Gb/s and 270Mb/s |
| Supported Standard | SMPTE 425M - 3G Level A Format |
| Supported Resolution | SMPTE 425M (3G Level A) 4:2:2: 1920×1080/60 (1:1),<br>1920×1080/50 (1:1).<br>SMPTE 274M (HD): 1920×1080I/60 (2:1) or<br>1920×1080/30 (PsF) I 1920×1080I/50 (2:1) or<br>1920×1080/25 (PsF) I 1920×1080/30 (1:1),<br>1920×1080/25 (1:1) I 1920×1080/24 (1:1), |

| | |
|---|---|
| | 1920×1080/24 (PsF)<br>SMPTE 125M (SD): 1440×487/60 (2:1)<br>SMPTE ITU-R BT.656 (SD): 1440×576/50 (2:1) Or dual link progressive, 625-line generic. |
| Balance | Belden 1694A cable:<br>150m at 2.97Gb/s<br>250m at 1.485Gb/s<br>480m at 270Mb/s |
| SDI Loop Out | |
| Number of Loop Out | 4 |
| Connector | BNC |
| Data Rate | 2.97Gb/s, 2.97/1.001Gb/s, 1.485Gb/s, 1.485/1.001Gb/s and 270Mb/s |
| Supported Standard | SMPTE 425M - 3G Level A Format |
| Supported Resolution | SMPTE 425M (3G Level A) 4:2:2: 1920×1080/60 (1:1), 1920×1080/50 (1:1).<br>SMPTE 274M (HD): 1920×1080I/60 (2:1) or 1920×1080/30 (PsF) I 1920×1080I/50 (2:1) or 1920×1080/25 (PsF) I 1920×1080/30 (1:1), 1920×1080/25 (1:1) I 1920×1080/24 (1:1), 1920×1080/24 (PsF)<br>SMPTE 125M (SD): 1440×487/60 (2:1)<br>SMPTE ITU-R BT.656 (SD): 1440×576/50 (2:1) Or dual link progressive, 625-line generic. |
| Balance | Belden 1694A cable:<br>150m at 2.97Gb/s<br>250m at 1.485Gb/s<br>480m at 270Mb/s |
| **Dual Link DVI Input Module** | |
| Interface Appearance | |
| Board Size | 216(L)×20(W)（mm） |
| Number of Inputs | 2 |
| Connector | Standard DVI-I socket |
| Max supported Resolution | 4096×2160@30 |
| Signal Level | T.M.D.S 2.9V~3.3V |
| Impedance | 50Ω |
| **3G-SDI Input Module** | |
| Interface Appearance |  |
| Board Size | 216(L)×20(W)（mm） |
| SDI Input | |
| Number of Inputs | 4 |

| | |
|---|---|
| Connector | BNC |
| Data Rate | 2.97Gb/s, 2.97/1.001Gb/s, 1.485Gb/s, 1.485/1.001Gb/s and 270Mb/s |
| Supported Standard | SMPTE 425M - 3G Level A Format |
| Supported Resolution | SMPTE 425M (3G Level A) 4:2:2: 1920×1080/60 (1:1), 1920×1080/50 (1:1).<br>SMPTE 274M (HD): 1920×1080I/60 (2:1) or 1920×1080/30 (PsF) I 1920×1080I/50 (2:1) or 1920×1080/25 (PsF) I 1920×1080/30 (1:1), 1920×1080/25 (1:1) I 1920×1080/24 (1:1), 1920×1080/24 (PsF)<br>SMPTE 125M (SD): 1440×487/60 (2:1)<br>SMPTE ITU-R BT.656 (SD): 1440×576/50 (2:1) Or dual link progressive, 625-line generic. |
| Balance | Belden 1694A cable:<br>150m at 2.97Gb/s<br>250m at 1.485Gb/s<br>480m at 270Mb/s |
| SDI Loop Out | |
| Number of Loop Out | 4 |
| Connector | BNC |
| Data Rate | 2.97Gb/s, 2.97/1.001Gb/s, 1.485Gb/s, 1.485/1.001Gb/s and 270Mb/s |
| Supported Standard | SMPTE 425M - 3G Level A Format |
| Supported Resolution | SMPTE 425M (3G Level A) 4:2:2: 1920×1080/60 (1:1), 1920×1080/50 (1:1).<br>SMPTE 274M (HD): 1920×1080I/60 (2:1) or 1920×1080/30 (PsF) I 1920×1080I/50 (2:1) or 1920×1080/25 (PsF) I 1920×1080/30 (1:1), 1920×1080/25 (1:1) I 1920×1080/24 (1:1), 1920×1080/24 (PsF)<br>SMPTE 125M (SD): 1440×487/60 (2:1)<br>SMPTE ITU-R BT.656 (SD): 1440×576/50 (2:1) Or dual link progressive, 625-line generic. |
| Balance | Belden 1694A cable:<br>150m at 2.97Gb/s<br>250m at 1.485Gb/s<br>480m at 270Mb/s |
| **DVI Output Module** | |
| Interface Appearance |  |
| Board Size | 216(L)×20(W)（mm） |
| Number of Outputs | 4 |
| Connector | Standard DVI-I Socket |

| | |
|---|---|
| Signal Level | TMDS pw, 165MHz bandwidth |
| Supported Resolution | SMPTE: SMPTE: 625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60 I 1080i50/59.94/60 I 720p50/59.94/60<br>VESA:<br>720×480@50i I 720×480@60i I 1024×768@60 I 1024×768@75 I 1024×768@85 I 1280×720@50 I 1280×720@59.94 I 1280×720@60 I 1280×800@60 I 1280×1024@60 I 1280×1024@75 I 1280×1024@85 I 1360×768@60 I 1366×768@60 I 1400×1050@60 I 1440×900@60 I 1600×1200@60 I 1680×1050@60 I 1920×1080@50i I 1920×1080@59.94i I 1920×1080@60i I 1920×1080@50 I 1920×1080@59.94 I 1920×1080@60 I 1920×1200@60 I 2048×1152@60 I 2560×816@60 |
| **DVI+VGA Output Module** | |
| Interface Appearance |  |
| Board Size | 216(L)×20(W)（mm） |
| DVI Output | |
| Number of Outputs | 4 |
| Connector | Standard DVI-I Socket |
| Signal Level | TMDS pw, 165MHz bandwidth |
| Supported Resolution | SMPTE: SMPTE: 625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60 I 1080i50/59.94/60 I 720p50/59.94/60<br>VESA:<br>720×480@50i I 720×480@60i I 1024×768@60 I 1024×768@75 I 1024×768@85 I 1280×720@50 I 1280×720@59.94 I 1280×720@60 I 1280×800@60 I 1280×1024@60 I 1280×1024@75 I 1280×1024@85 I 1360×768@60 I 1366×768@60 I 1400×1050@60 I 1440×900@60 I 1600×1200@60 I 1680×1050@60 I 1920×1080@50i I 1920×1080@59.94i I 1920×1080@60i I 1920×1080@50 I 1920×1080@59.94 I 1920×1080@60 I 1920×1200@60 I 2048×1152@60 I 2560×816@60 |
| VGA Output | |
| Number of Outputs | 4 |
| Connector | Standard DB15 Socket |
| Supported Resolution | VESA: 800×600@60 I 1024×768@60 I 1024×768@75 I 1280×768@60 I 1280×1024@60 I 1440×900@60 I 1400×1200@60 I 1600×1200@60 I 1920×1080@60 I 1920×1200@60 I 2048×1152@60 |
| Signal Level | R、G、B、Hsync、Vsync:0 to1Vpp±3dB （0.7V Video+0.3v Sync ) 75 ohm<br>black level: 300mV Sync-tip:0V |
| **SDI Output Module** | |

| | |
|---|---|
| Interface Appearance | |
| Board Size | 216(L)×20(W)（mm） |
| Number of outputs | 4 |
| Connector | BNC interface |
| Signal level | 800mV±10% |
| Supported Standard | SMPTE 425M - 3G Level A Format |
| Supported Resolution | SMPTE: 480i I 576i, 720p/50/59.94/60 I 1080i/50/59.94/60 I 1080p/50/59.94/60 |
| Equalization | Belden 1694A 100m HD 1.485G, 300m SD 270Mbps |
| **HDMI Output Module** | |
| Interface Appearance | |
| Board Size | 216(L)×20(W)（mm） |
| Number of outputs | 4 |
| Connector | HDMI standard type A interface |
| Supported Resolution | SMPTE: 625/25 PAL, 525/29.97 NTSC, 625/50p PAL, 525/59.94p NTSC,<br>720p50/59.94/60 I 1080i50/59.94/60 I 1080P50/59.94/60<br>VESA: 800×600@60 I 1024×768@60 I 1280×768@60 I 1280×1024@60 I 1600×1200@60 I 1920×1080@60 I 1920×1080@50 |
| Format Standard | HDMI 1.3 |
| **Genlock Interface** | |
| Interface Appearance |  |
| Board Size | 165(L)×19(W)（mm） |
| Genlock Input | |
| Number of Inputs | 1 |
| Connector | BNC |
| Genlock Input | |
| Number of Inputs | 4 |
| Connector | HDMI standard type A interface |
| Supported Resolution | SMPTE: 625/25 PAL, 525/29.97 NTSC, 625/50p PAL, 525/59.94p NTSC,<br>720p50/59.94/60 I 1080i50/59.94/60 I 1080P50/59.94/60<br>VESA: 800×600@60 I 1024×768@60 I 1280×768@60 I 1280×1024@60 I 1600×1200@60 I 1920×1080@60 I 1920×1080@50 |
| **Function** | |
| Switch | Support any two inputs fade in fade out |

| **Extras** | |
|---|---|
| Communication | RS232 USB TCP/IP |
| Power Supply | 100-240V IEC-3 |
| Working Environment | 0°C~45°C |
| Stored Environment | 10% to 90% |
| Product Warranty | 3 years parts and labor warranty |

# B. Contact Information

## Warranty:

All video products are designed and tested to the highest quality standard and backed by a full 3 years parts and labor warranty. Warranties are effective upon delivery date to customer and are non-transferable. RGBlink warranties are only valid to the original purchase/owner. Warranty related repairs include parts and labor, but do not include faults resulting from user negligence, special modification, lighting strikes, abuse(drop/crush), and/or other unusual damages.

The customer shall pay shipping charges when unit is returned for repair.

**Headquarter:** S603~604 Weiye Building Torch Hi-Tech Industrial Development Zone Xiamen, Fujian Province, P.R.C.

- **Tel:** +86-592-5771197
- **Fax:** +86-592-5771202
- **Customer Hotline:** 4008-592-315
- **Websites:**
  - ~ http://www.rgblink.com
  - ~ http://www.rgblink.cn
- **E-mail:** support@rgblink.com

# C. Software Upgrade

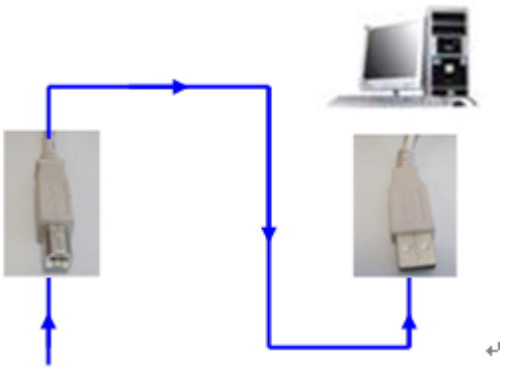
## 1. Upgrade by USB Interface

(Please install the USB driver: VCP_V1.3.1_Setup.exe -32bits,

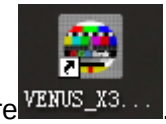
VCP_V1.3.1_Setup_x64.exe -64bits and VENUS X3 control software before upgrade)

Tool: VENUS X3 control software. Upgrade file: xx.bin.

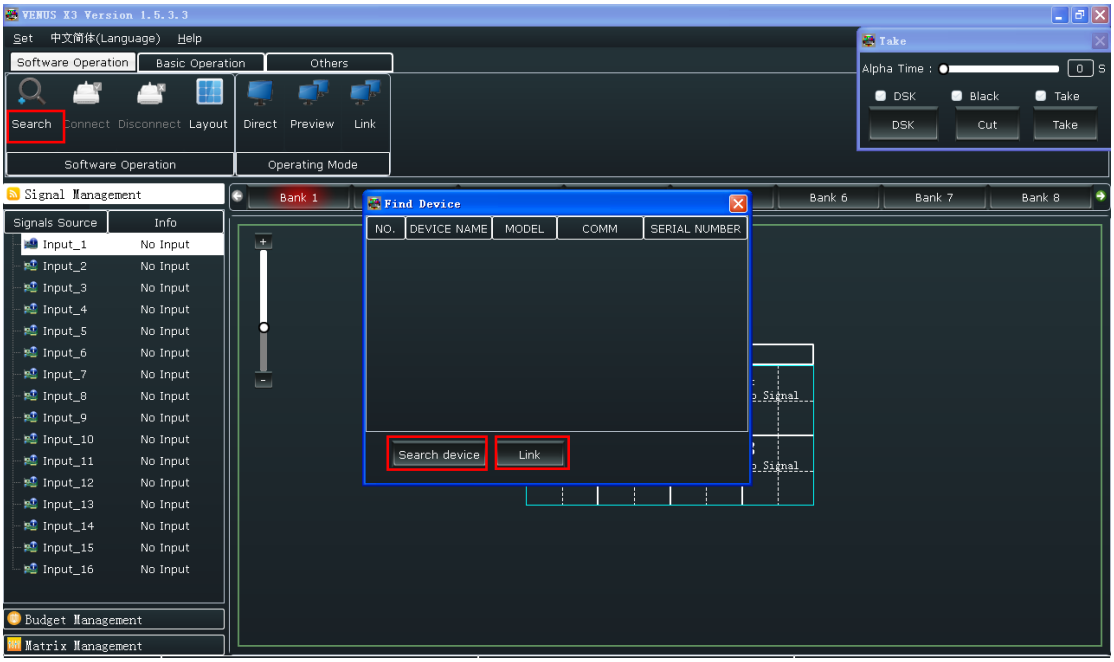
1. Connect VENUS X3 to computer by USB cable.



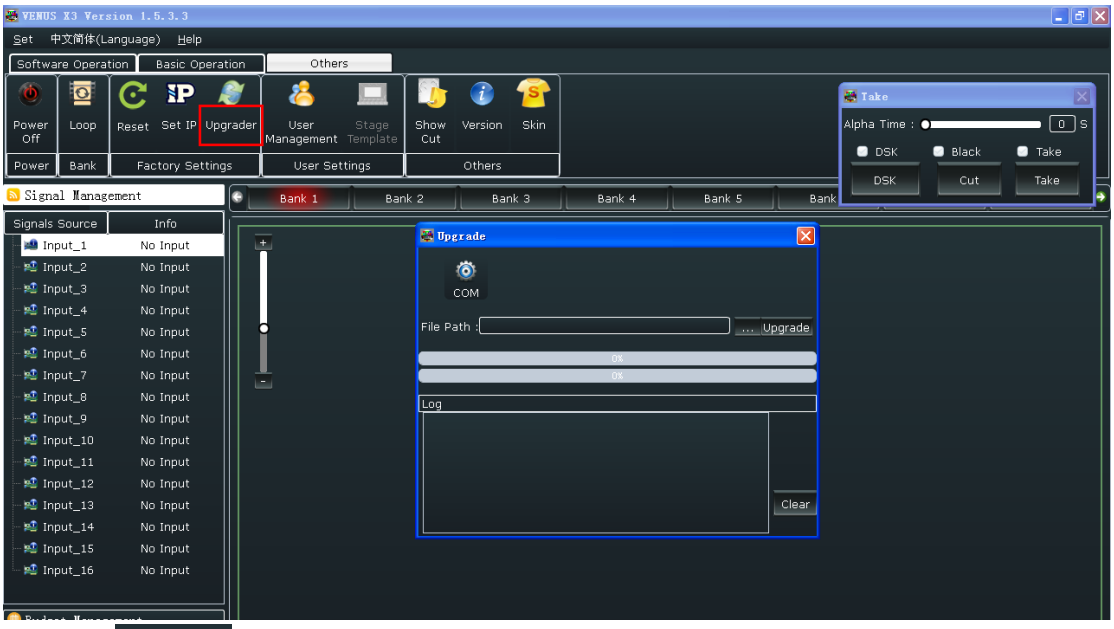
2. Power on device and find the correct COM port (Right click my computer-Properties-Manager-Com & LPT).

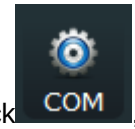
3. Open VENUS X3 control software 

. Click Search Device and then Link VENUS X3.

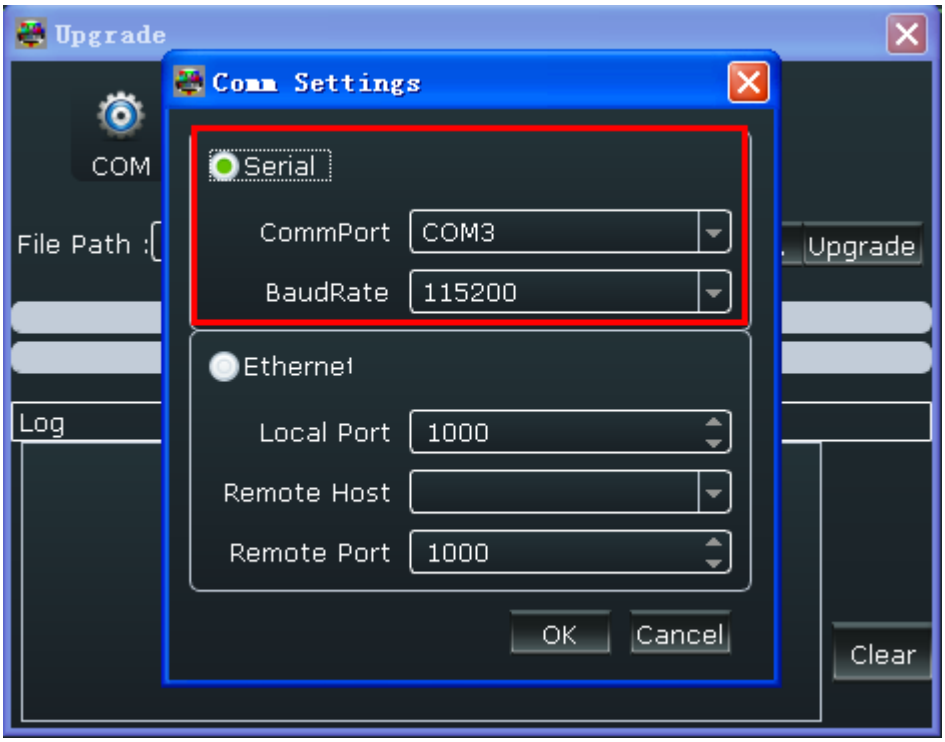



4、After having linked the device, select Others and click Upgrade.

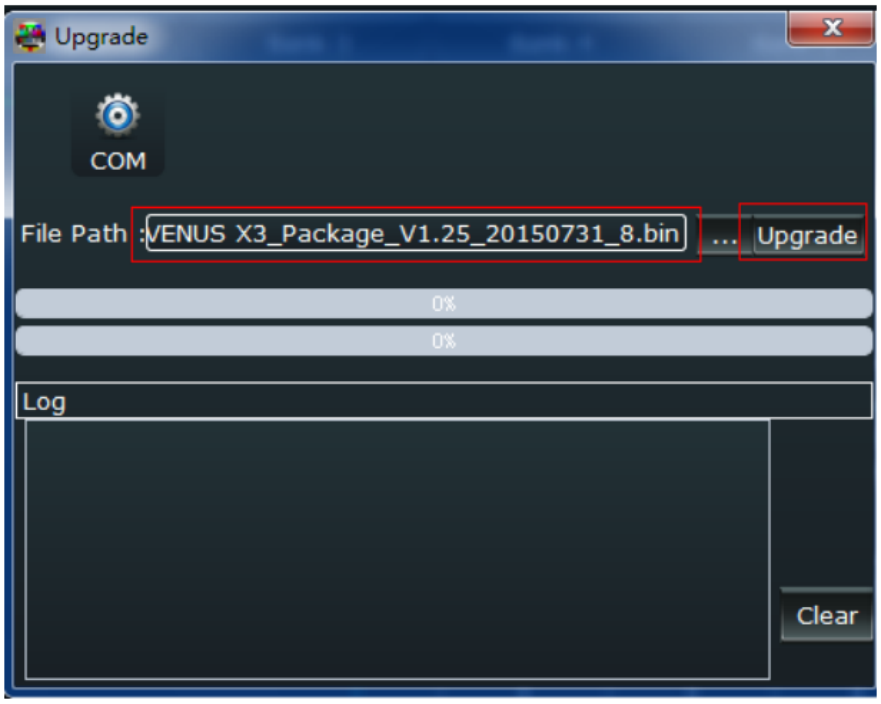



5. Click 

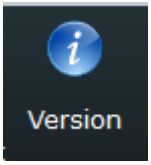
, and set the Comm setting.




6. Click to import the upgrade file (xx.bin), then click upgrade.



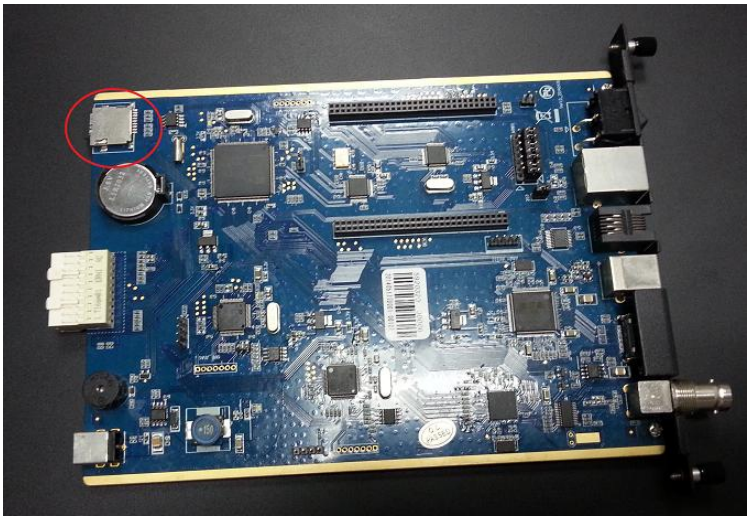

7. There will be few seconds' beeps while upgrading. Upgrade finish after beeping ends and the success notification notes.

**8. Go to Others area and click**  **to check the version.**

## 2. Upgrade by SD Card

**Upgrade by SD card. (If upgrade by way 1 is success, no need to use way 2 to do upgrade.)**

1. Pull out the SD card from the communication board in the device.



2. Plug the SD card into the card reader.

3. Connect SD card reader to computer, copy and paste the upgrade file(xx.pkg) to the SD card.

4. After having pasted the upgrade file to SD card, change its name as _update.pkg.

5. Re-plug the SD card to the communication board, and re-plug the communication board to the device.

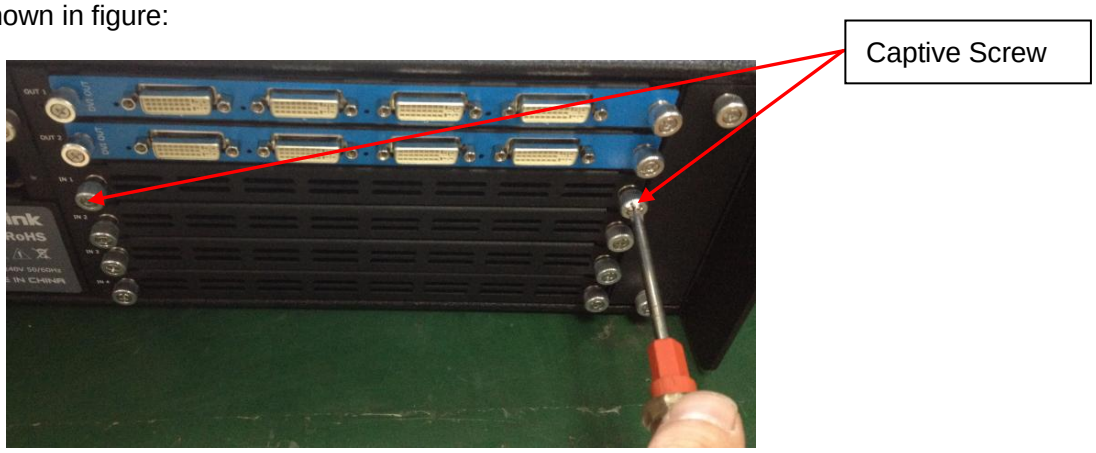
6. Power on device, there will be beeping, the upgrade finished after beeping ends.

# D. Optional Module Installation and Replacement Instruction

VENUS X3 supports replaceable input and output optional modules, user can install or replace the optional module according to actual need. The specific installation steps are as follows:

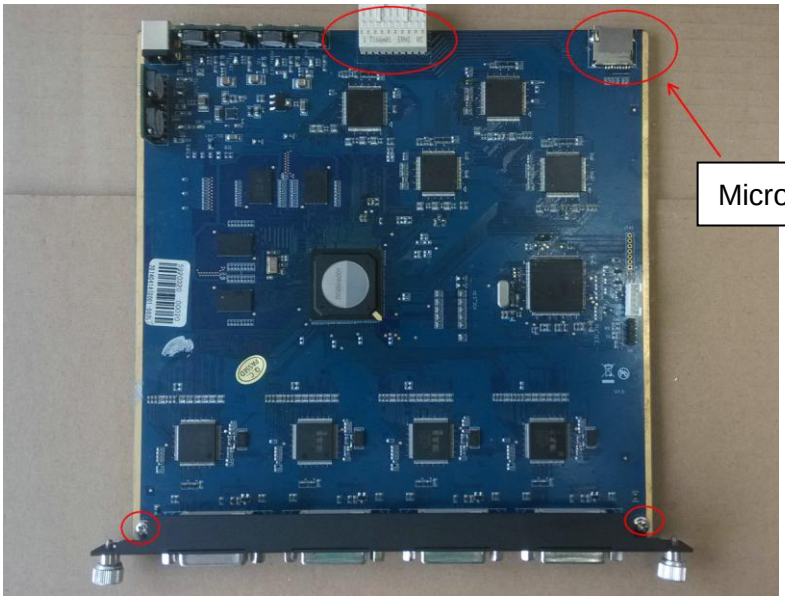
**Install the Optional Module**

1. Unscrew the 2 captive screws in input modules block, and pull out the input module block, as shown in figure:



2. Install the input module:

① For the whole PCB input module with DVI or HDMI interface, fix the input module on the plate with 2 M3*4 flat screws, also need to install the 2G Micro SD card.




DVI input module:

② For the joined PCB input module with CVBS, HDMI, VGA, USB or SDI interface, fix the input module on the plate with 2 M3*4 flat screws and 2 M3*4 round head screws.

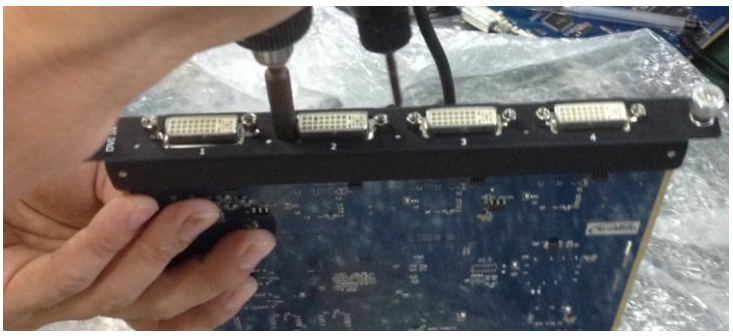
HDMI input module:

VGA input module:

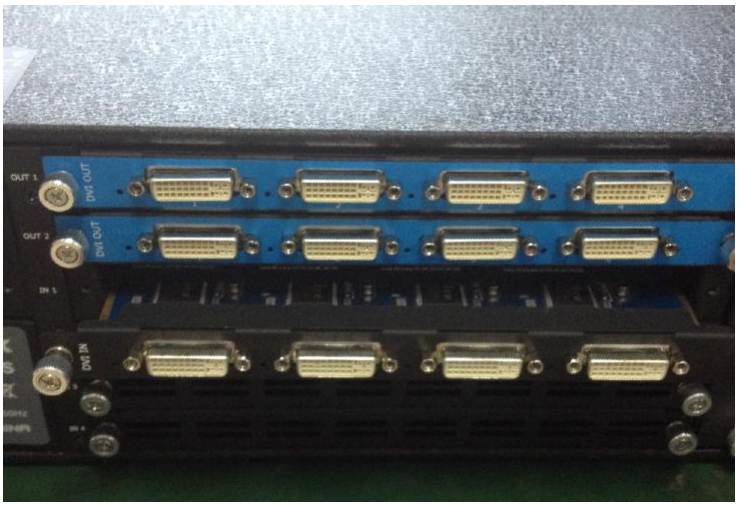
CVBS input module:

USB input module:

3. Fix the input module block with fixed screws, as shown in figure:



4. Push the input modules into the device along the slide rail, and screw the captive screws, as shown in figure:



**Note:** The install steps of output module installation and input/output module replacement are the same as above.